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The

ROYAL CANADIAN DENTAL CORPS

Quarterly



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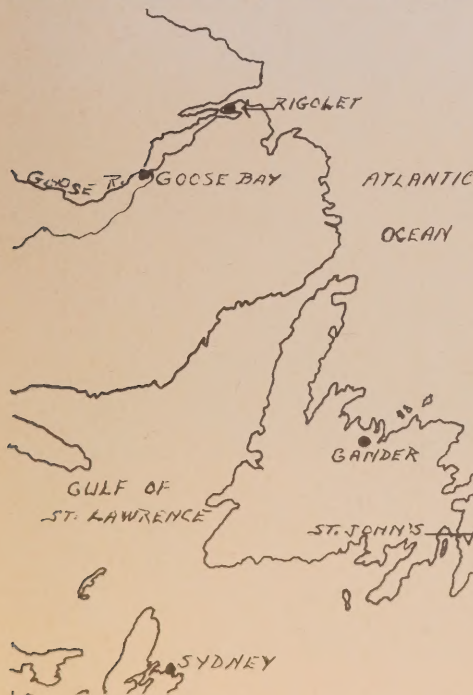
Scenic view from the dental clinic - Goose Bay

THE DENTAL CORPS IN GOOSE BAY

Lt-Col J.M. Smith, CD, DDS



The story of Goose Bay begins during the Second World War in 1941 when the range of aircraft then in use was relatively short. A staging post on the ferrying route for military aircraft to Britain was urgently required. American and Canadian survey teams searched the then British territory of Labrador for a suitable air-field site. In June 1941 the Canadian group working for the Department of Transport under the direction of Mr Eric Fry selected a site which was almost an ideal one, known to the local residents as "Robert Michelin's Berry Patch". The American team under Col Elliott Roosevelt arrived soon afterwards. Since Newfoundland already had a "Gander", Mr Fry suggested that the new airport be named "Goose". Control of the area was granted to Canada and the Canadian Military have been established there since that time.



Contrary to popular belief, Goose Bay is not in the far north, being on the same parallel of latitude as Edmonton Alberta and Nottingham England. The climate is one of mostly clear dry weather with temperatures ranging from -35°F to a possible high of 95°F and an average annual snowfall of 140". The site is a level sandy plateau 150 feet above sea level lying between the mouths of the Churchill (Hamilton) and Goose Rivers. Although it is 150 miles inland, the airport can be reached by ocean-going ships via Hamilton Inlet, Lake Melville, Goose Bay and Terrington Basin. The fact that fairly large ships could approach the site meant that construction could start as soon as equipment could be assembled and delivered. The first ship arrived 17 Sep 41 and the first aircraft landed on a temporary runway in November; an almost unbelievable record. Bombers passed through in December, and fighter aircraft on their way overseas first arrived on 4 Jul 42.

Almost from the beginning, American Forces have operated in the area. The present USAF Base operates under a twenty-year lease granted by Canada in 1951. The respective Dental Corps have always co-operated very closely. In fact, in recent times, "The Greater Goose Bay Dental Society" has been a relatively large and active group.

As the air station grew in size and importance it became a major responsibility not only for the RCAF but also for the Canadian Army which supplied ground defence, anti-aircraft coast artillery and service troops. The RCN provided escorts for the ships bringing construction equipment, troops and supplies.

For a time, the threat of a North American invasion via the North East Route was a very real one and the area defences were manned accordingly. On 13 Mar 43, the Goose Bay garrison strength was 1300 all ranks. From the fall of 1943, as the danger diminished and the number of troops was reduced, Canadian military equipment was winter-tested in the area. Even after the end of World War II, artillery units from Camp Picton Ont returned to the area for summer training.

The Canadian Dental Corps began its close association with Goose Bay in 1942 with two dental companies being represented from then until the end of the war. No 35 Coy (Eastern Air Command) sent the first dental officer to the area on temporary duty, while No 26 Coy (Military District No 6) had the first permanent detachment. Many readers probably wonder why two dental companies had detachments in Goose Bay simultaneously during the war. At that time, dental companies were assigned the task of catering to the needs of one of the three Services. Integration of the CDC's effort on a regional basis didn't become effective until after the war. Hence, since there were both Army and Air Force personnel in Goose Bay two separate CDC companies supplied detachments to look after their "own". The stories of these two units in Goose Bay will be related separately.

NO 26 COY CDC

S.S. "Lady Rodney" lying off Sandy Point between Lake Melville and Goose Bay. Seen from the "C.G.S. NB McLean" ferrying troops and supplies on last 22 miles of their journey. July 1942.



Planning the dental establishment for the Goose Bay area began in March 1942. The advance party of the garrison to be known as "G" Force left Moncton by air on 1 June. It consisted of six officers and forty-six other ranks. The garrison was controlled by the GOC in C Atlantic Command, but for administration was under the district officer commanding Military District No 6. Dental treatment was the responsibility of No 26 Coy. The first main party of 23 officers and 418 other ranks, mainly

experienced woodsmen of the New Brunswick Rangers, plus all manner of provisions and equipment embarked aboard the SS "Lady Rodney" in Halifax 16 Jun 42. The party included a dental officer, Capt KV Allan of Toronto, and Sgt DW Smith, with their necessary dental kits and supplies. This dental detachment was responsible for the Goose Bay area, giving priority to The NBR and RCAF, and emergency treatment to civilians building the military installations.

The Lady Rodney sailed independently to Sydney where she joined a North Atlantic convoy. The troops all armed and carrying ammunition wore life belts at all times. They had two boat drills a day as there was considerable U-boat activity in the Gulf of St Lawrence and Western Atlantic. Accompanied by two corvettes, the ship reached Hamilton Inlet on 21 Jun 42. The draught of the Lady Rodney prevented her sailing over the bar into Goose Bay, necessitating the transfer of troops and stores to smaller ships for the final 22 miles of the trip. Conditions were far from ideal in the early stages, living under canvas in damp chilly weather and with one small cook stove serving 140 men.

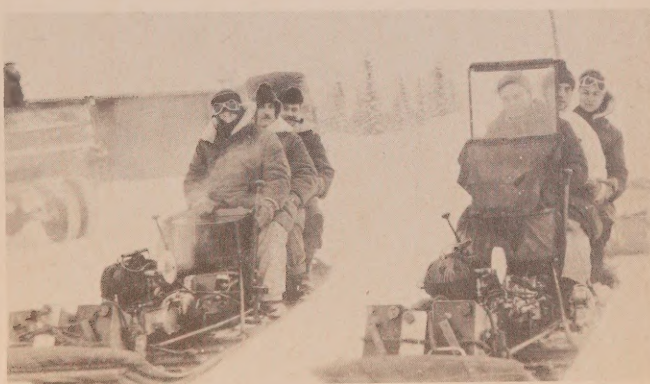
The RCAF were well established by this time, however, and a dental clinic was set up in their 35-bed hospital.

In general, the garrison troops seemed busy and happy and a sense of urgency pervaded. U-boat and raider activity in the North Atlantic led to a state of alert in August. The 30th AA Regt RCA had gun posts on towers at 1000 yard intervals around the airfield with a crew of 16 men per gun. Some supply ships en route to Goose were sunk. One carrying the winter's supply of beer ran aground and was lost. (what a tragedy!)

In March 1943 a self-contained dental clinic was completed and it was considered to be the best non-RCAF building in Goose Bay.

During the winter of 44-45, local authorities notified Colonel Roach, the Area Commander in Goose Bay, that children in the school and hospital at the Grenfell Mission were in desperate need of emergency dental attention. Capt Levita volunteered to go there over the week-end. The trip by motorized toboggan was uneventful and treatment was carried out in the small dental clinic in the hospital.

Who says "Ski-
doos and Huskies"
are new? Capt
H Levita and
party leaving
Goose Bay for
North West River
and near tragedy
- January 1945.



On the return journey a howling blizzard came up suddenly and the Captain and his party were soon hopelessly lost. Fortunately, the other vehicle had returned to camp earlier and reported the group missing. Canadian Army, US and civilian search teams started out, but it was a local trapper who finally spotted a ski stuck in the snow as a signal. The men, two to a sleeping bag, were found after ten hours trying to survive in the cold with little in the way of food or equipment. An agonizing trek through the deep snow to a cabin about a mile away followed, but the weather cleared the next day and the party with their rescuers returned to Goose. Thus, a mercy mission almost ended in tragedy.

RIGOLET CLINIC

Goose Bay defences included a small coast defence battery placed in action in June 1942 at Rigolet, about 120 miles east of Goose Bay. At this point Hamilton Inlet is joined to Lake Melville by a narrow channel and this was defended by 108th Coast Battery RCA.

Dental officers of 26 Coy and staff from Goose made periodic visits to Rigolet. Capt KV Allan and Ptes Kennedy and Holmes made the first of these visits and sailed aboard the "Fleurus". Facilities were few but the local Hudson's Bay Company factor urgently required dental treatment and this may have prompted him to offer facilities for a clinic in an old office building. There was no running water, electricity or even a bathroom, but there was space and it was dry and heated.

Dental treatment was brought up to date for military patients as well as some of the local civilian residents. One of these, a woman whose income came from fishing, had suffered from toothache for 10 years! A trapper who came for extractions told of a toothache the year before while out on his trapline. The ache was so bad that in desperation he heated a piece of wire red hot and jammed it into the tooth. The shock nearly killed him, but it stopped the ache! Dr Allan records that the favourite toothache remedy used by the residents living in isolation was a mixture of Sloan's liniment and iodine.

A second clinic in Rigolet was ready for the summer of 1943. It was a 16 X 21 foot corrugated iron quonset hut. Electricity and running water were provided and all supplies and equipment were carried in by the dental detachment on periodic monthly visits. The last recorded visit took place in September 1944.



In January 1942 the CDO, Major HS Crosby, made arrangements for treatment of the 56 RCAF and 400 construction personnel at station Goose Bay. In March that year Capt GV Turnbull and Sgt Jones flew in from Moncton in a DC 3. Portable equipment was set up in the temporary building occupied by the medical officer. There were no hangars at this time and only a short gravel runway. The first clinic closed 1 April when the detachment returned to Moncton.

On 15 Aug 42 the station diary records, "at long last the RCAF have their own dentist. Capt SW Weiler arrived today". This posting followed a request to the CDO from the station CO stating that accommodation for a clinic was available. The new group found the space in question occupied by the 26 Coy CDC detachment. The latter had been serving all personnel in the area, which may explain the diary reference to their "own" dentist. In any case, the new dental detachment couldn't work until alternative accommodation had been found for the 26 Coy detachment.

The first permanent RCAF clinic was located in the Station Hospital, the building which is now the Corporals' Club.

Capt CI Coburn arrived on 4 Dec 42 flying from Dorval in the unheated cargo space of a Hudson bomber. He writes:- "equipment consisted of a stationary fountain, portable foot engine, an electric operating light and my two CDC trunks. No prosthetic laboratory or X-ray facilities were available and water had to be kept running all the time to avoid frozen pipes. We wore overshoes in the Clinic".

By March 1944 the staff consisted of two dental officers, assistants, a technician and an orderly. The clinic equipment had been improved considerably with the addition of an X-ray machine.

At that time, Capt Archy Cohen wrote:- "I had one frightful experience which I shall never forget. One day a Ventura aircraft took off with personnel homeward bound on leave etc. The plane was airborne some fifty feet or so when it suddenly went haywire and crashed. It quickly burst into flames and before it could be brought under control all hands perished. The resulting conflagration was so intense that identification was undertaken with the greatest difficulty. My job was to identify these men from their dental charts and I shall never forget the bodies stretched out on the cement floor. After hours of gruesome work proper identification was finally made. The bodies were burned beyond recognition and the stench of seared flesh remained with me for weeks afterward".

About this time, some of the additional treatment responsibilities included the Radio Unit at Grigg's Harbour and the RAF Detachment at Goose Bay. The latter, at times quite large, exists to this day serving Transport and Bomber Commands.

During the spring of 1945 the Army clinic was closed and the detachment withdrawn. The troops remaining in the area became the responsibility of the 35 Coy (RCAF) Clinic reversing the situation of 1942!

When the war was over it was decided that the RCAF hospital building should be converted into a Trans Canada Airlines hotel. By this time it had been decided that one dental detachment was sufficient for future requirements and the dental clinic was once again moved to a barrack block which has since become the airwomen's barracks. Treatment for civilians and the few first arrived dependents was pretty well confined to emergencies. The civilian employees in the area now included many ex-servicemen, and since there was no civilian dentist, DVA documents were forwarded to the CDC detachment and treatment for veterans made up a major part of the clinic workload for a time.

By March 1946, the RCAF and Army strength was about 400 all told and it was learned that the station was expected to continue in operation indefinitely.

NO 50 COY CDC

On 23 Mar 46 all officers with the exception of the CDO were posted to 50 Coy CDC with its headquarters at "HMCS Stadacona", Halifax. This had been a Navy company since its establishment in June 1943. On 1 Oct 46, No 50 Coy was re-designated 12 Coy CDC (CA(AF)).

12 COY CDC (and 12 COY RCDC)

The early days of the Goose Bay Clinic after being taken over by 12 Coy were transitional ones. For short periods the clinic was unmanned and treatment was at times rendered to Canadian troops by American dental officers. More often, though, Americans were treated in the Canadian clinic.

By May 1947, with work up to date and the station strength reduced to approximately 150 personnel, the detachment was withdrawn. Maj SK Oldfield and Cpl R Fortin flying from Dartmouth reported for a short period of temporary duty during the summer. All equipment was removed when they returned to Halifax and the clinic closed.

In September 1947 Capt WW Anglin and Sgt WD McDougall were sent to Goose Bay on temporary duty, but the assignment was changed to a permanent one after a month and the clinic was reopened.

By this time treatment was being provided for service dependents on the same basis as for servicemen. Civilians paid cash according to the DVA schedule of fees with employees and dependents of other government departments paying in a variety of paper-creating ways. At times patients came from far away places including Frobisher Bay 800 miles to the north, Fort Chimo and Mingen.

At this time the work load was tremendous as the huge American Base was without a dental officer for over a year. Parades were held in the US Clinic every Friday and the operating rooms of both the US and Canadian hospitals were used as required for multiple extraction cases.

1 Apr 49 was an important day as Confederation made Newfoundland Canada's 10th province and Goose airport became Canadian territory.

15 COY RCDC

In December 1950 the clinic was removed from the responsibility of 12

Coy and became a part of 15 Coy with headquarters in Montreal. However, supplies and equipment continued to be provided by 12 Coy until October 1951. A laboratory technician was posted intermittently from the central lab at 25 COD Longue Pointe, but the lab has been manned full time since June 1959.

The building occupied by the clinic had been mainly given over for emergency married quarters and the clinic itself was large enough for only one dental officer. This inadequate accommodation led to the renovation of an abandoned Hudson's Bay Company store as the new clinic. The view from the treatment area of this building seen through picture windows would alone have made the change worthwhile.

The new clinic was opened in the spring of 1952. It accommodated two dental officers and provided extra space for alternate chairs and an X-ray bay. The first operating unit was installed about this time.

View from clinic window - Goose Bay



One difficulty of this period was that of assigning priorities of treatment. It almost seemed that service dependents knowing they were going to Goose "saved" their cavities for free filling. On posting out, the opposite was true, with the same people suddenly believing in prevention and early treatment. Dependents often felt that they should have first priority for treatment. The result was a continuous pressure on the dental officer to meet the needs of the various groups requiring treatment. The problem was even more acute when there was no dentist on the USAF base. The introduction of fees for dependents in 1963 substantially reduced the demand for treatment from this group.

The late 50's brought the first renovations to the building. New footings were placed, new floors, complete interior redecoration and white asbestos shingles applied over the green tar paper. The improvement inside and out was striking.

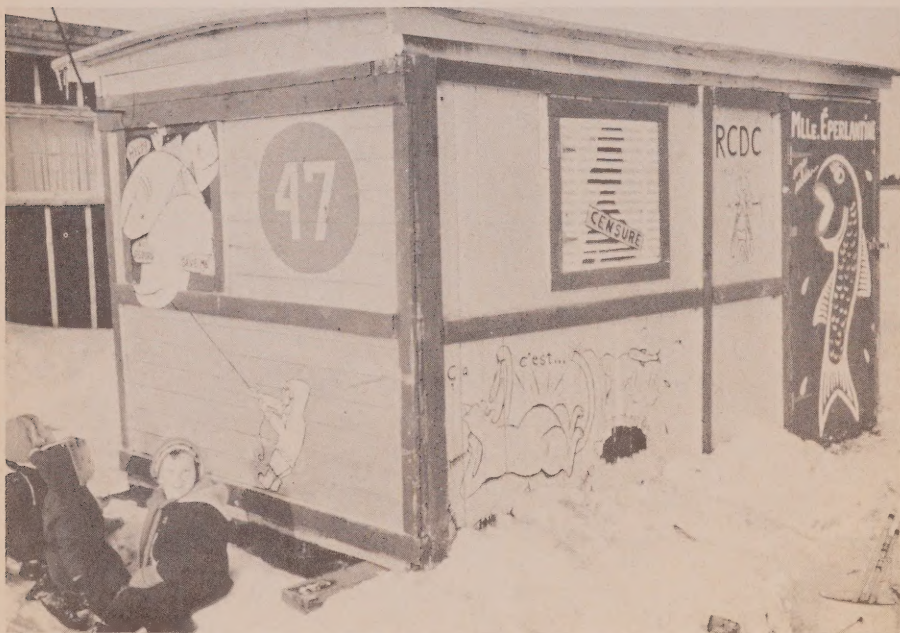
Extensions to the building and complete renovations took place during the summer and fall of 1963. Much of the initial layout was changed to make better use of the space available. The building was extended to allow a new bay for the clinical technician and X-ray, plus a small dark-room. The old X-ray bay became a sterilizing area. Few RCDC clinics can now match this one for location, equipment and facilities. The pioneers of Goose Bay clinics would be amazed at the changes, and possible even more so to see the clinic area landscaped with a lawn.

A tour of duty at RCAF Station Goose Bay is a popular one and deservedly so. The challenge of isolation is being replaced by the challenge of being part of a rapidly developing and fascinating area. The amenities include those common to other well equipped stations, plus outstanding facilities for hiking and camping, boating, fishing in both summer and winter, and hunting. In fact, there is something for everyone, even if he wishes to sit at home and watch TV (1 channel only) or listen to CBC radio Labrador. Those selected for a posting to Goose Bay can consider themselves fortunate.



Clinic Staff July 61 Front
row L to R: Sgt E D'Avignon,
AW LA Weins, Sgt DJ Pierce,
LAW EE Denis, Sgt MO McDonald.

Back row L to R: Capt JJY
Turcotte, Maj JM Smith, Capt
JRA Vincent.



RCDC fishing shack - Winter 1960-61.

The following list of dental personnel who have served in Goose Bay indicates the year of arrival on posting and the rank held at that time. It is regretted that some names, particularly those of RCAF assistants who served prior to 1960, are unknown to the author and have been omitted.

NO 26 COY CDC

1942 - Capt KV Allan, Lt GA deLagran, Sgts Smith DW, Smith HW, Cpl Hardie RJ, Ptes Holmes LG, Kennedy JS
1943 - Capt V Toplitsky, Sgts McLanson PR, Rushton DM, Cpl Cresswell WJ, Ptes MacGillivray EV, Stanford CJG
1944 - Capt H Levita, JR Picard, Sgts Duperron AJ, Fillmore EO, Cpl Chapman T, Pte Dugas JL
1945 - Sgts Matheson GA, Simpson FR, Ptes Cook VJ, Doucette WP

NO 35 COY CDC

1942 - Capts CI Coburn, GV Turnbull, SW Weiler, Sgts Jones, Reddin SO, Cpl MacIntosh R, Ptes Kelly RA, Sleep C
1943 - Capts J Andrews, EM Bourgeois, Pte Brown LE
1944 - Capts A Cohen, JT Marshall, Lt IG Nathanson, Sgts Costin WG, McIsaac AL, Cpls Boutlier C, Silbert, Pte Cameron M
1945 - Capts FJ Forristal, R Parker, Lt A Schwartz, Sgts Kennedy FM, MacDonald JM, Cpls Benard, McDougall
1946 - Capts CA MacIntosh, W Shadek

NO 12 COY CDC

1947 - Maj SK Oldfield, Capts WW Anglin, JD Vautour, Sgt MacDougall WD, Cpl Fortin R
1949 - Capt H Hart, O/Cdts CE Dexter, EF Dexter, WH MacNeil, TE Spracklin, EJ Whyte
1950 - Maj AR Smith, Pte Jones RK

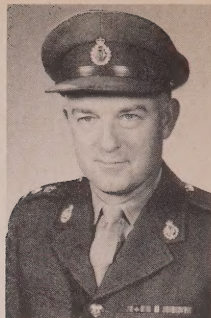
NO 15 COY RCDC

1951 - Sgts Blanke GW, Desjardins C, Egan PAA
1952 - Maj HS Lankin, O/Cdts WB Donohue, EH Jones, Pte Clarke JE
1953 - Capts RG Docks, HJ Smart, 2/Lt RA Newton, Sgt Hussey T, Pte Cantin A
1954 - 2/Lt WD Sanders, Sgt Bourgeois A
1955 - Capt JB Scott, Sgts Lavictoire L, Mongeau JAN
1956 - Majs JMA Donely, RA Ramsay, Sgt Tapp JM
1957 - Capt CS Whitman
1958 - Capt JJY Turcotte, Cpl McDonald MO
1959 - Maj JM Smith, Capt VA Low, Sgt D'Avignon E
1960 - Capts JF Begin, WO Sugars, JRA Vincent, Dr RA Wheatley, Sgt Pierce DJ (RCAF)
1961 - Maj RA Fell, Sgt Robertson SE
1962 - Capt JGB Parent, Sgts DeBlois JR, Richardson WS
1963 - Sgt Innis RB
1964 - Maj HG Bunston, Capt GDV Dippel

RCAF ASSISTANTS

1956-60 - Cpl Torrens CM, AW Harrison M
1960-65 - Cpl Palmer KP, LAWs Audel MFE, Dennis EE, Gruener I, Herbert MJ, Kilgour SL, Kirley SJ, AWS Boyko VJ, Clutterbuck SJD, Dubuc ML, Harrison J, Keddy KY, McMillan SJ, Tooper PL, Weins LA, Yuhas E

It-Col N.A. Butcher, CD, DDS



There's an old adage about "not being able to see the forest for the trees." Dentists are often so engrossed with the work in their usual field of operation that they don't see what they pass in order to get to that field. The lips must always be parted before commencing operative dentistry. How many dentists give them more than a cursory glance or notice only some gross abnormality when the patient presents himself for treatment?

Some will probably say that the lips are not within their care; that they are part of the face and therefore come within the province of the medical practitioner. However, many patients who never visit a medical practitioner are seen regularly and often by a dentist. Whether the treatment of the lips is within the dentist's field of care is not in question; what is important though, is that the abnormal be recognized and treatment initiated. The early diagnosis of lesions of the lip could forestall gross disfigurement and perhaps even an early death.

Lesions of the lip will be classified under four headings and the common examples of each discussed briefly. The headings are:

- a. Malformations
- b. Neoplasms
- c. Infections
- d. Trauma

MALFORMATIONS

Fordyce Spots - This is a symptomless condition resulting from hypertrophic aberrant sebaceous glands and was first described by Fordyce before the turn of the century. It is very rare in children but about 70% of adults show evidence of it in varying degrees. Although more often seen on the inside of the cheeks in the 3rd molar area, they also occur quite often on the lips. They are chamois coloured and when the tissue is stretched appear as slightly raised yellow dots or globules. A few patients have noted a slight itching or burning sensation from them.

Treatment is not usually indicated. Some patients will suddenly discover these and develop a cancer phobia. This condition must be recognized and the patients assured it is not associated with a malignant disease.

Congenital Pits - This is a congenital anomaly with a hereditary tendency. They are well marked circular depressions on the vermilion borders appearing darker on the lower lip and they secrete mucous. Treatment is not usually indicated but patients occasionally discover these and need reassurance if they develop a cancer phobia.

Mucocele - These are described by Col R.B. Shira of Washington D.C. as retention cysts. They are discrete swellings in the lips most often at the lateral incisor region of the lower lip. The overlying mucosa may be thinned out and the lesion shows a blue colour. The cyst may be one sac or in several small sections. Complete excision is the recommended treatment. (There were two cases reported in dental literature in 1964 where two lesions diagnosed as mucoceles were excised, examined histologically and a diagnosis of mucoepidermoid tumor made.) This points to the necessity for microscopic examination.



Extra-oral view of a mucocele -
"From Goldman: Current Therapy
in Dentistry, vol 1, St. Louis,
1964, The C.V. Mosby Company."

Haematoma - Occasionally this collection of blood will be seen following an injury. They often become apparent after difficult dental operations.

NEOPLASMS

Papilloma - Papillomas are benign epithelial tumors which sometimes occur on the lips. They may be soft or hornified, have a white to grayish yellow colour, have a peduncle and are fairly movable. Opinions as to malignancy vary. Some feel they are always benign but tend to recur. Others feel that they may gradually transform into malignant lesions. The danger signal is fixation at the base and induration of underlying tissues. Only surgical treatment is recommended.

Fibroma - Fibromas and fibrosarcomas of the lip are relatively rare.

Carcinoma - Carcinoma of the lower lip is the most common form of oral cancer, comprising 25% of such tumors. Following are some points of interest regarding cancer of the lip:

- a. 99% of all lip carcinoma occurs in white people
- b. it is more common in people with thin dry skin
- c. it is more prevalent in people with a history of outdoor life, eg, farmers, sailors
- d. 70% of the lip carcinomas in the U.S.A. occur in people who live, or have lived in southern parts of the country
- e. the ratio of carcinoma of lip between men and women is 19 to 1; and
- f. pipe smoking has been proclaimed a significant factor because of heat intermittently applied to one small area.

The prognosis of carcinoma of the lip is quite good if diagnosed early. It responds well to radiation treatment. Cancer of the lower lip progresses more slowly and does not tend to metastasize as does that of the upper lip. The latter is much less common and the prognosis is not as good. Early diagnosis followed by prompt treatment is most important.



Craterous ulcer of vermillion with rolled, white border - moderately advanced squamous cell carcinoma. "From Kerr, Ash and Millard: Oral Diagnosis, ed 2, St. Louis, 1965, The C.V. Mosby Company."



Two vesicular, crusted herpetic lesions involving upper lip and left nares. "From Kerr, Ash and Millard: Oral Diagnosis, ed 2, St. Louis, 1965, The C.V. Mosby Company."

INFECTIONS

Herpes Simplex - This is a common lesion and it may be seen in a very severe form. Little water vesicles appear on the lip and soon erode to form ulcers that show a crusted exudate. This condition is caused by the herpetic virus. Apparently the virus can lie dormant in the tissues until some exciting factor like fever, trauma, food sensitivity, emotional or psychic changes, or menstruation sets it in motion. It usually lasts ten to fourteen days and broad spectrum antibiotics (aureomycin or terramycin) in ointment base are the treatment of choice. Heavy doses of Vitamin B complex will generally minimize attacks in women who regularly get them with menstruation, providing it is given well before the expected outbreak. NOTE: Secondary syphilitic lesions may look very much like these "cold sores," and like them, often occur at the corner of the mouth.

Syphilis - Occasionally syphilitic lesions will be seen on the lip; in fact chancre of the lip is the most frequent extra genital lesion. It usually occurs as an ulcerated, crusted lesion, with raised margins and a red areola varying from the size of a pin head to one half inch in diameter. It may appear punched out and be either shallow or deep. It is usually painless and the glands which drain the area are enlarged. The primary lesion may resemble herpes simplex but the chancre usually lasts three to six weeks. Differentiation from carcinoma is by its rapid development, early marked lymph node involvement, quick recovery and the presence of treponema pallidum in the lesion.

The secondary stage may appear a few weeks or up to several years after the disappearance of the chancre. The mucous patch is slightly raised, light gray and surrounded by a red areola. The corner of the lip is the most common site and it could be confused with the crusty stage of herpes simplex. It is very contagious at this stage.

Tertiary lesions rarely occur on the lips.

Thrush or Moniliasis - These are soft pearly white, spreading, coal-
escent, slightly elevated patches that do not scrape off readily. They are
usually painless and must be differentiated from lichen planus and leukoplakia.
There seems to be considerable variation in treatment suggestions. Antibiotics
are contra-indicated. Fungicides seem to help.

TRAUMA

The lips are subject to trauma from actinic rays, hot cigarettes and
cigars, cigarette papers, chemical irritants, loss of intermaxillary space and
blows.

Actinic Cheilitis - The lips are swollen and painful and the vermilion
border develops a scaly crust.

Case Report: Lt Sherman Spatz of USN Dental Corps recently wrote a case
report on a 50 year old active duty warrant officer with this condition. He had
a history of much outdoor life and was in exceptionally good physical health.
He reported to the dental office with a soreness and tingling in the lip. He
was advised that actinic changes had occurred and was told to refrain from further
solar exposure. He was observed annually and three years later was referred to
oral surgery. A modified horizontal wedge section was removed. The patient
recovered and is on regular post-operative observation. The final diagnosis based
on microscopic findings indicated that the specimen was consistent with superficial
squamous cell carcinoma of the lip. Because of early diagnosis and treatment, and
slow metastasis in the lower lip, this warrant officer should be considered cured.

Mechanical Fissures - Anything which causes a decrease in the inter-
maxillary space, with the resulting over folding of the cheek at the corner of
the mouth may be the cause of this type of fissure. These are often found in
older edentulous patients wearing poorly constructed dentures. The drooling
and pooling of saliva is a constant irritant. Increasing the vertical dimension
with properly constructed dentures should clear up this condition.

Leukoplakia - This condition appears quite often on the cheek and tongue
and not infrequently on the lip. It is characterized by the formation of milky
white patches of keratinized epithelium. It may vary from a flattened scaly
lesion to one of extreme keratotic activity.

Leukoplakia appears ten times more frequently in men than in women and
the excessive use of tobacco is considered to be an outstanding factor. It is
necessary to consider other irritants which also may be totally or partially
responsible and these include heat, spicy foods, alcohol, local irritation from
dentures or rough teeth and syphilis. Col Shira states that in considering leuko-
plakia we should keep the four "S's" in mind: syphilis, smoke, spirits and spices.

Clinically, the lesion may appear as one of three progressive stages. In
the early stage there is a smooth, opaque, pearly white patch with minimal or no
surrounding inflammation. Later there is a thickening of the epithelium so that
there are leathery plaques now greyish white in appearance and closely demarcated
from the surrounding tissue. In the advanced stage there are areas of heavy
keratinized epithelium, a warty appearance and fissures and cracks are quite
common. In this stage pain is not uncommon.

Treatment:

- a. Removal of irritants
- b. Scrupulous oral hygiene, including washing the lesion with castile soap
- c. Surgical excision

Leukoplakia is now definitely considered as a precancerous lesion. Where simple hyperkeratosis is present, the prognosis is good. Malignancy has been known to occur in areas where repeated biopsies were made. Where there is dyskeratosis and inflammation the prognosis is not so good. Hoberk found that 10% of 1272 cancer patients had had pre-existing leukoplakic lesions. The treatment suggested is surgical excision. If ignored, a potential malignancy site remains.

CONCLUSION

Lesions of the lip have been discussed briefly within the following classification:

- a. Malformations
- b. Neoplasms
- c. Infections
- d. Trauma

The dentist has a serious responsibility in recognizing abnormalities of the lip and initiating prompt treatment.

References

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EXTRACTIONS DENTAIRES POUR LE PATIENT

SOUS THERAPIE ANTICOAGULANTE.

Major J.J.Y. Turcotte, DDS, BA



Introduction.

De nos jours, surtout chez les adultes d'un certain âge, les maladies cardio-vasculaires deviennent de plus en plus fréquentes. Parallèlement, la médecine moderne permet à un grand nombre de malades autrefois voués à la mort à brève échéance, de jouir aujourd'hui d'une existence relativement normale.

Or, comme Darlington le dit dans "Death and Dentistry" (1): "Il existe une relation intime entre la profession dentaire et les maladies cardio-vasculaires." Nous en sommes tous conscients et prenons les précautions nécessaires: histoire de cas, référence au médecin, etc. Cependant, nous devons, de temps à autre, traiter une population particulière comportant un risque chirurgical qui n'existait à peu près pas il y a quelques années à peine. C'est celle des patients sous thérapie anticoagulante à longue échéance.

Pourquoi et quoi faire?

Les agents anticoagulants tels le Dicoumarol ou l'athrombine K sont des drogues de plus en plus populaires en médecine d'aujourd'hui. On les emploie pour traiter des conditions telles que:

- a/ L'embolie pulmonaire
- b/ la Thrombophlébite
- c/ l'Occlusion artérielle
- d/ la Thrombose veineuse
- e/ l'Occlusion coronaire.

Or, sous traitement médical pour une condition cardio-vasculaire quelconque, le patient qui absorbe quotidiennement une certaine quantité de ces médicaments présente une possibilité d'hémorragie sérieuse lors d'une extraction dentaire; sa coagulation sanguine est retardée. Que peut donc faire le dentiste en face de ce problème?

Les opinions sont partagées. Selon Shira, "la drogue devrait être éliminée et remplacée par la vitamine K jusqu'au moment où le temps de prothrombine soit de nouveau normal." (2) Par contre, on nous dit aussi que: "le danger de formation d'un thrombus au moment de l'arrêt d'un agent anticoagulant est plus grand que le danger de saignement lui-même. La soustraction ou la réduction de l'anticoagulant, surtout combinée avec l'emploi de la vitamine K, peut causer la formation d'un thrombus ou provoquer une embolie." (3) En vue de

ces opinions différentes, voici le traitement présentement adopté par le Département Dentaire du Centre Médical de la Défense Nationale, à Ottawa. (4)

Méthode.

a/. Le patient se présente directement au laboratoire de l'hôpital, tôt le matin, pour l'obtention de "son" temps de prothrombine.

b/. Si le temps de prothrombine est inférieur au rapport de 2.5, l'extraction sera faite.

c/. Sédation, normalement Démerol 50mg., Phénergan 25mg., I.M. 30 minutes avant l'anesthésie.

d/. Pression sanguine prise trois fois avant l'opération pour établir la normale du patient.

e/. Infiltration locale ou bloc, selon le cas, Xylocaine 2% HCL, 1:100,000 Epinéphrine.

f/. Patient amené à la salle d'opération, ou l'extraction est faite de la façon la plus stérile possible.

g/. Pression sanguine enregistrée pendant l'opération, une baisse soudaine étant à surveiller.

h/. Extraction d'une molaire ou deux incisives au maximum.

i/. Mise en place d'un agent hémostatique soluble dans l'alvéole, sutures en croix avec soie 000, et pression occlusale sur coton pour les deux heures qui suivent.

j/. Pression sanguine post-opératoire immédiate, une heure et deux heures plus tard.

Explications.

L'expérience a démontré que le saignement qui se produit après une extraction dentaire faite selon la méthode décrite plus haut, peut très bien se contrôler localement. Le rapport du temps de prothrombine la journée même est important puisqu'il peut varier d'une journée à l'autre selon le patient. La sédation est nécessaire, car nous voulons un patient qui va coopérer tout en étant quelque peu insouciant. La normalité de la pression sanguine du patient est établie, une baisse soudaine surveillée attentivement. Anesthésie locale avec épinéphrine pour assurer une perte de sensation profonde et de longue durée. Le patient est surveillé pendant les trois heures qui suivent l'intervention et sa pression étant normale, le saignement contrôlé, il retourne chez lui pour revenir cinq jours plus tard alors que les sutures sont enlevées.

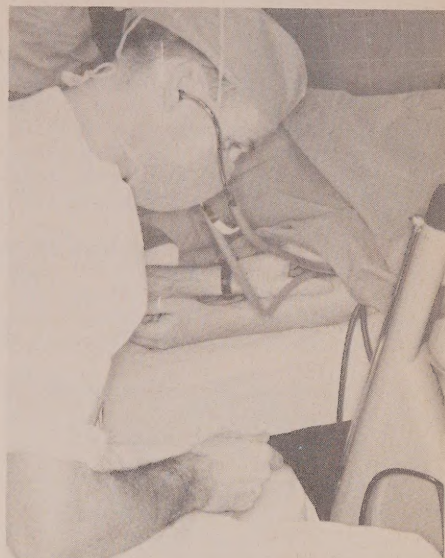
Conclusion.

Le "Club Prothrombine" du Centre Médical de la Défense Nationale compte 150 membres répartis comme suit: Militaires en service actif: 81; Vétérans; 65; Police Montée: 4.

La nécessité d'extraction dentaires pour ce groupe de patients se présente assez souvent et tous sont traités de la même façon. Des dizaines d'extractions faites pour ces malades, une seule a présenté quelques complications. L'extraction de dents a donc pu être accompli alors que le taux d'anticoagulation, d'une importance primordiale pour certains, a été maintenu tel que prescrit.



Prise de la pression sanguine pendant la chirurgie.



Le patient prêt pour la chirurgie. L'Extraction commence sous conditions stériles. Une lame de bistouri No 12 détaché le joint epithelial.

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Summary

The procedure for tooth extraction currently employed at the National Defence Medical Centre for cardiac patients under long term anticoagulant therapy is described.

These patients are treated by the dental officer without interference with their blood clotting mechanism. Provided the Prothrombin ratio does not exceed 2.5 on the operation day minimal dental surgery may be performed.

Dental services to the dependants of Service personnel and particularly to dependant children are being made available on a wider scale as certain areas are being declared isolated for dental purposes. In January 1965 a study was initiated to determine the orthodontic requirements of service dependents attending Department of National Defence elementary and secondary schools. The aim was to compile information about these children which would serve as a guide for future treatment planning and would permit an assessment to be made on the need for further training in orthodontics in the overall training program. Unit Commanding Officers were requested to advise dental officers conducting the RCDC annual dental examinations at Department of National Defence schools to include the complete range of conditions ranging from interceptive to complex stages warranting orthodontic treatment and report findings under three general headings.

Eight RCDC units situated in Canada and Europe reported results totalled and tabulated as follows:

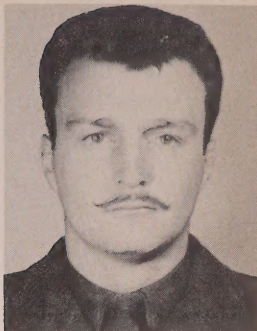
DND SCHOOL CHILDREN	NO	PERCENTAGE
No Examined	29,924	100
No and percentage requiring orthodontic treatment	4,523	15.11
No and percentage who have undergone or are undergoing orthodontic treatment	362	1.21
Percentage of those requiring treatment who have had or are undergoing orthodontic treatment		7.41

In doing this survey it should be recognized that general information of a broad scope was requested. At most it gives a starting point for future studies. The results were expressions of different examining dental officers and vary considerably depending on the individual's training, experience, knowledge and interest. The percentage of Department of National Defence school children recorded requiring orthodontic treatment compared to civilian counterpart was considerably lower than expected. Information from other sources indicates that probably at least 70% of school children would benefit from some orthodontic treatment and that 40% or higher need such treatment. Reasons for this large discrepancy between Department of National Defence and the civilian population are mainly:

- The examinations were conducted in class rooms with inadequate lighting, and with only mouth mirror and explorer. Moreover, Radiographs and study models could not be employed.
- There was no recording of how many school children missed this examination and who may need or are undergoing treatment.

AFRICA SAFARI - '65

Capt P.S. Wade, DDS



On the 12th of August a Finnish Airways Douglas DC 6 rolled down runway No 2 of Nicosia's international airport - destination "Dark Continent of Africa". Aboard were 88 soldiers of UNFICYP, who counted among their numbers three Canadians all of whom would have a nine day tour to such exotic countries as Egypt, Kenya and Ethiopia.

The first stop-over was Cairo, the leading commercial centre of Egypt and the largest city on the African Continent. Unfortunately it was only an eighteen hour visit and naturally the impressions were vague and fleeting. The best recalled, of course, was the camel ride which took us around and between the awesome pyramids of ancient and once glorious Egypt. A ride on a camel, even a pyramid camel, is an extraordinary experience. My gracious steed crouched on the ground with legs folded and as I mounted, the Egyptian handler shouted instructions. The animal then rose in a succession of lurches and grunts. While swaying back and forth and from side to side in a desperate attempt to maintain my balance, I learned at first-hand why camels are known as "Ships of the Desert".



Pyramids of Cheops

Whilst weaving precariously between the pyramids, feeling very much like a sea-sick "land lubber", I was much relieved for the brief respite which followed. As we swung under the 450 foot peak of the mighty Pyramid of Cheops our guide stated that we should stop to watch a professional climber scale the 4500 year old tower of granite. He scaled the pyramid - in 7 minutes. A normal climber we were told would spend some 60 to 90 minutes. Then, after only a few minutes rest, he was on the ground beside us again - a truly phenomenal display of agility and fitness.

As I swerved and swayed away from the pyramids, I chanced one last look backward and was immediately struck by a feeling of insignificance. Once out of their awesome range, though, it was all excitement again as we packed our bags for the second stop on our trip - Nairobi, the capital of the recently independent British East African colony of Kenya.

Our first venture outside the capital was a visit to Nairobi National Park, five miles from the city centre. Travelling in a chauffeur-driven Mercedes through the 44 square miles of parkland was to say the least, a pleasant change from the transportation provided for viewing the pyramids. The park itself is an escarpment which descends to a wide-spread grassplain in which there are numerous small water pans and the long stretch of the Athi River. On one occasion we stopped the car by the river to watch the hippopotami and crocodiles in the water pools, which was interesting enough in itself not counting the baboon which decided to try and hitch a ride on the hood of the car as we moved off. The scramble for cameras was of course hilarious, but, as we learned later there was really no hurry for as a result of many years of safety the animals had long ago ceased to fear humans. Next came an hour's stroll along the bank of the river, stopping every few steps to photograph the almost endless antics of monkeys in every tree.

Once again back in the car, and rid of the baboon, we drove slowly along the road through wandering herds of zebra, wilde beeste, dik dik and impala. The impala surely must be one of the most graceful animals in the world and it was a joy to watch the many hundreds of them jumping in all directions, 30 feet in a single leap and often 10 feet in the air. Eventually, after an hour's search the unmistakable long necks of the giraffes were seen, and shortly thereafter we spotted the king of the beasts. Much to our disappointment he had just eaten and not even the honking horns of our cars could disturb his slumber. Only once did he raise his monstrous head to look haughtily at our column and then it was back to dreamland - some king!



Some king!



Elephants - Amboseli National Park

As dawn approached the next morning, we were well into the Masai-Amboseli National Park, an area of 1259 square miles situated just north of Mount Kilimanjaro and approximately 150 miles from Nairobi. Following the booking of an African guide who subsequently proved to be the most skilled of the twenty available, we felt fully repaid for our early rising. He not only led us directly to all the big game but much to our delight, found more than twice the variety of species seen by our fellow tourists.

This reserve is particularly famous for its rhinoceros, which we were told would charge anything near to him. Unbelievably, that is precisely what happened to our group and we, along with the driver, were completely taken by surprise. Luckily the "rhino" decided our car was too much competition and swung clear by a few yards - not without, I might say, leaving us all too excited to take even one picture.

One of the most memorable experiences in the reserve was a confrontation with two Masai warriors. Semi-nomadic pastoralists, and warlike, their tribe once succeeded in terrorizing the Kikuyu and other inhabitants of the East African plateau, and driving them from their traditional farm lands. Only during the early part of this last century were they pacified by the British. The two proud and intractably independent warriors we saw were covered from head to toe with red ochre well mixed with grease, and demonstrated for us their ability with their flat, razor sharp spears. It is with these spears that they still protect their cattle from raiding lions called "Zimba" in Swahili. We left these proud warriors with some regret, but once again it was time to move on - to Ethiopia.



Masai warrior

Viewed from the air, Ethiopia is a land of beauty with deep gorges, volcanic mountain peaks and rugged plateaus all offering a scenic grandeur. Addis Ababa, the capital, had been described in our handbook as an "island floating in a primitive sea", for around the city for a depth of several miles grows a circle of bluish-green eucalyptus trees, originally Australian and imported into Ethiopia at the end of the 19th century. "Addis Ababa" in Anharic means "New Flower". I realized how appropriate this name is, for flowers literally grow everywhere in great profusion.

During our stop in the capital we became increasingly conscious that Addis Ababa was like much of Africa with the old contrasting with the new almost everywhere. It was on the second and last day of our stay that it was explained to us that Ethiopia, one of the oldest independent nations of tropical Africa, being surrounded by Islam, isolated herself from the rest of the world for nearly ten centuries. Not until after the Italian occupation and Emperor Haile Selassie 1st was restored to his throne in 1941 was the country able to make a serious effort to modernize. Unfortunately, the pace appears to be painfully slow.

Our first visit in the city was to the newly constructed Africa Hall, an ultra-modern all-African convention centre. It is an imposing \$2 million structure the impressive stained glass in the lobby of which depicts Ethiopia's struggle for independence. Passing through the lobby into the main convention hall, we learned that the United Nations Economic Commission for Africa, a pan-African group, hold their sessions here.



We also visited the Imperial Palace in Addis Ababa which was not open to the public, but we wandered through the grounds.

The last stop of the tour was the market place where everyone was besieged by traders from seven to seventy. Good salesmen they all were and the bargains were irresistible, especially when animal skins, drums, knives and spears were available for a tenth the asking price. Bargaining is a "must" when shopping in Africa.

In Nairobi and in Addis Ababa evenings were passed visiting the many night clubs and enjoying the local food. Unfortunately night clubs were not quite what everyone expected, since rock-and-roll, the twist and the jerk were very much in evidence. No doubt these are some of the "modern aspects" that were explained to us previously.

On the ninth and last day, bags were woefully packed with souvenirs bulging from all pockets, and twelve hours later following a short stop in Bijouti, French Somaliland, we were lining up for a perfect landing in Nicosia. In retrospect it was a trip of a lifetime and never to be forgotten, for in a small way I feel I have gained an insight into the East African way of life.

The RCDC News

RCDC Bonspiel

The Fourth Annual RCDC Bonspiel was held in Camp Borden 18-19 Feb 66. 32 rinks competed in three events and there were approximately 170 Corps personnel in attendance - making this the largest RCDC assembly in peace-time.

Following the finals, a presentation dinner was held in the CFMTC Sergeants' Mess. Trophies, crests and prizes were presented with appropriate complimentary remarks. (and some not so complimentary from the bystanders)

Members of the RCDC(S) staff who formed the Bonspiel Committee are to be commended for their efforts in organizing this event so efficiently.

"A Event" - for the Wansbrough Trophy

Capt Cliff Mason's 11 Coy rink from Edmonton, curling superbly throughout the bonspiel defeated Maj Jim Wright's RCDC(S) rink in the final.

Winners - Front row L to R
Skip - Capt CM Mason, Sgt
RA Neil, Sgt KJ Shergold,
Pte RE Osborne

Runners-up - Back row L to R
Skip - Maj JJN Wright, Cpl RS
Walker, Capt CH Loken, SSgt
HC Kirby



"B Event" - for the RCDC(R) Officers' Trophy.

The RCDC School was not to be denied some consolation - as Lt-Col Harry Frotheroe's rink defeated Maj Bill Collier's foursome from 14 Coy in this event.

Winners - Front row L to R - Maj AG Andrews, Maj JMA Donely, Col GR Covey, Lt-Col DH Frotheroe - skip
Runners-up - Back row L to R - Sgt Johnson RB, Pte Palmer WG, Capt MH Harach, Maj WR Collier - skip.



"C Event" - for the Warrant Officers' and Senior NCOs' Trophy.

Last year's "A" event winners from the Directorate skipped by Brig Baird took a fancy to the new WOs' and Sr NCOs' Trophy and posted the necessary win over WO2 Archie Davison's 15 Coy rink.

Winners - Front row L to R - Mr AL Griffin, Lt-Col SG Bagnall, Lt-Col AW Brusso, Brig KM Baird - skip
Runners-up - Back row L to R - Lt-Col FD Charman, Capt DG Jones, WO2 Davison AF - skip and SSgt Wood DB



The RCDC School reports that plans are already underway for the Fifth Annual Bonspiel.

1 Dent Det

Meetings

All officers of No 1 Dent Det attended the seminar conducted by Col Lister, US Army Dental Corps, at NDMC on 17 Jan 66.

Officers of No 1 Dent Det attended a lecture with coloured slides conducted by Mr A Gee of Denco on 11 Feb 66. His subject was "Trends in Dental Equipment."

It-Col JA Lauziere Retires

It-Col "Ad" Lauziere has retired from the Armed Forces after a long and colourful career. He had war-time service with the RCAF and later donned the kahki uniform to serve in North West Europe. Since 1949 he has been a member of the RCDC and has had a variety of postings ranging from Germany to Camp Shilo. On 30 Mar 66 a party was held at 13 PD to honour It-Col Lauziere. Col BF Kearney presented him with a RCDC plaque and extended best wishes on behalf of the Corps.

1 Dent Eqpt Dep

Commissioned from the Ranks

Congratulations are extended to Lt TM Jackson on being commissioned and promoted to the rank of Lieutenant Specialist Officer effective 16 Feb 66. He has had many years of service, commencing with the CDC in July 1940.



Sports

The two curling rinks from this Unit won the annual Curling Challenge Trophy held between 1 DED and 1 Central Medical Equipment Depot.

Maj JW Fletcher is again commended for his prowess as a bowler. He won a trophy and cash for having the high 5 game cross in the Upper Ottawa Valley Carlings Men's Team Bowling Tournament held on 29 Jan 66.

11 Dent Coy

Special Events

No 13 Dental Clinic Cold Lake personnel participated in the station Polar Carnival Week by creating and entering a dental exhibit in the parade of floats. They also carved an eight foot molar to compete in the ice sculpture event.

Curling

RCDC personnel in Calgary won the main event in the Calgary CFMS Bonspiel after being asked to supply a rink to balance out the number entered.

From L to R - Maj JJ Walker, WO2 Kennedy FA (Skip), Pte Vasek JJM and Capt GA Johnson.



12 Dent Coy

Duty Trips

Major RH Headley and Cpl Thorburn JH comprised the dental team involved in Exercise "White Caribou". It is reported that they had a somewhat hazardous six days since Newfoundland was hit by heavy snow storms. They also were involved in Exercise "White Express" which took place in Norway.

Cpts FGC Arpin, IM Hamilton and JO Strom, Sgts D'Eon DR, Grundy FG, MacDow CE and Cpl Albertson GG returned from their last trip aboard HMCS Cape Scott and Bonaventure looking as though they had spent a couple of months in Florida. They spent time in the following ports: San Juan; Rio de Janeiro, (particularly gay because the visit coincided with the yearly carnival); Montevideo; Puerto Rico; Bridgetown, Barbados; and Chagarumus Bay, Trinidad.

SSgt Brown AD Retires

Personnel in the Halifax area attended a party to honour SSgt Brown AD who is retiring on medical grounds after 25 years of service. Col Cunningham presented him with a suitably engraved beer mug. Best wishes are extended to Art in his new environment.

Sports

Capt HS Wood and Pte Beauchamp C/JN were members of the Halifax garrison bowling team that competed in the Eastern Command tournament in Camp Gagetown 17-18 Feb. They did well, finishing 2nd and 5th respectively.

A dental rink consisting of Lt-Col JG Butler (skip), Sgt Clarke JE, Sgt Schell EL and WO1 JE Shiner won the Supply Bonspiel at HMCS Cornwallis on 22 March.

Death of RCDC Officer

CFHQ recently announced the death of Major HJ Cashin, 34, on 11 Apr 66. Major Cashin's home was Sydney, NS. As a subsidized student he was commissioned as a second lieutenant in the RCDC in October 1956. On graduation from the Dental Faculty of Dalhousie University he was posted to 14 Company and promoted to captain 1 Jun 58. He served at various RCAF Stations and Army Camps including Fort Churchill, Man. In August 1964 he was promoted major and posted to 12 Company and prior to his death served at HMC Dockyard, Halifax. All members of the Corps extend deepest sympathy to his wife Eileen and two children.

13 Dent Coy

Special Events

In the last issue of the Quarterly, Capt George Moore's retirement from the RCDC was duly recorded.

He wonders if he will have to wear a beard on retirement like Capt John Lincoln. This photo was taken at the party held at RCAF Station Trenton on Capt Moore's retirement.

From all reports, Colonel and Mrs Roger are thoroughly enjoying their trip to Morocco, Spain and Portugal.



14 Dent Coy

Red River Threat

Personnel of No 14 Dent Coy assisted Cpl Roy in banking his home with sand bags in readiness for the rising Red River in his community.

Meetings

Lt-Col Anglin, Major Brown and Capt Buchholz attended the clinical program of the Winnipeg Dental Society on 21 Mar 66. Dr Kenneth R Cantwell of the

University of Oregon Dental School spoke on "Complete Utilization of Rotary Instruments" and "Sound Amalgam Restoration".

Sports

The Manitoba Dental Association held its annual bonspiel at the Granite Club. Capts Doyle, Buchholz, Mori and Anderson represented No 14 Dent Coy and reported two wins and two losses.

LSgt Cable NJ recently passed his Bronze Medallion Life Saving Course.

15 Dent Coy

Dental Public Health

No 6 Clinic at Goose Bay sponsored an excellent Dental Public Health program during the first week of February. Co-operation from Station authorities helped to contribute to its success. The program included the following:

- a. examination of and lectures to school children
- b. DPH films shown at school and over the local TV station
- c. posters placed in every section
- d. articles in the RCAF newspaper
- e. radio and TV spot announcements made daily during the week
- f. a controlled panel discussion on TV.

Special Events

A sugaring-off party was held in a maple grove near St Jean recently and was well attended by RCDC personnel and wives/girl friends from the area. Entertainment included a sleigh-ride, dancing, and of course refreshments. Capt RF Cooper was chief organizer and sugar tester. (or is it taster?)

RCDC School

RCDC Displays

The National Survival and DOSP displays were transported to the Faculty of Dentistry, University of Toronto, to assist the staff in putting on an "Open House" on 13 Feb 66. The displays will be left in their museum until the end of the semester.

STANDING: L to R: Maj RJ Bryant, Maj HG Bunston, Maj GIJ Bisailon, Maj IW Susser, Maj VM McMaster, Maj WH Murray.

SEATED: L to R: Maj AG Andrews, Lt-Col DH Frotheroe, Col GR Covey, Maj DH Newell, Maj JJN Wright.

Officers' Casualty Care Course
and Officers' Clinical Course
14 Feb - 18 Mar 66.



Sports

The annual contest between medical and dental officers' rinks in Camp Borden for the Garth Evans Trophy resulted in the Dentals once again being victorious. The DOs' rinks were skipped by Lt-Col Frotheroe and Maj Wright.

4 Fd Dent Coy

Professional Meetings

The regular monthly professional meetings are continuing with Major Begin as program chairman. The January meeting considered "Surgical Aspects of Periodontia". The February meeting was hosted by RADC officers at British Military Hospital Inzerlohn where films on "Flexibility in Operative Dentistry" and "Surgery for Immediate Denture Insertion" were viewed and discussed.

The US Army dental officers in Kassel hosted the professional meeting on 18 Mar 66. Canadian, German and Belgian officers were in attendance. A display of field dental equipment was set up including a Canadian mobile clinic. The Alston airtor connected to the air brake system of our mobile clinic attracted much attention. Col RB Shira, USEUR Dental Surgeon, was the after-dinner speaker.

The dental NCO study group, chaired by WO2 Abernethy, has been considering the benefits and techniques of fluoridation and the role and employment of dental tradesmen. Sgt Reid has been elected as the new chairman of this group.

Curling

Murren - Switzerland
SSgt Sullivan in action.
Some form! Some background!
Lt-Col Richardson and SSgt Sullivan curled in the German Curling Association International competition in Murren.
SSgt Sullivan's rink won "A" division of the Men's League - Fort York Curling Club; and with his wife as vice-skip, he won "A" division of the Fort York Mixed League.



35 Fd Dent Unit

Meetings

35 Fd Dent Unit was host to the 767 Medical Detachment (Dental Service), US Forces, Verdun Area January Education Meeting which was held at 1 Air Div HQ, Metz, on 7 Jan 66. 18 officers attended, consisting of 14 US Army and 4 RCDC.

Curling

Maj Dickie's rink from 3 Wing attended a bonspiel in St Gallens, Switzerland. It was the first all Canadian rink to win first prize in a major bonspiel there.

LAW Sandy McMillan, Dent A, 3 Wing, was on the rink that won the first event in the Annual WF Air Div Curling Bonspiel held in Baden-Baden, Germany.

Special Events

A farewell party was held for Maj Roy, Capt Nattress and Cpl MacLean who will be leaving for Canada shortly on rotation.

Leave

Capt Chernesky proceeded on six days leave to Cairo, Luxor and Aswan; and Sgt Lindsay went on four days leave to Sharm El Sheik on the Gulf of Aquaba with the Canadian Signals Detachment.

Rotation

CCUNCYP

The clinic personnel are looking forward to their return to Canada in April and are leaving back at the tremendous experience of the past six months.

Training

University of Toronto - Toronto, Ontario

Lt-Col WH Carter - Occlusion and Occlusal Correction - 21-26 Feb 66

Maj JMA Donely - Orthodontics Course in Dentistry 18-22 Apr 66

University of Michigan, Ann Arbor, Michigan

Maj EMC Franklin - Oral Surgery - 14-25 Mar 66

The Doctors' Hospital, Toronto, Ontario

Maj IAC MacDonald - Oral Surgery - Mar-May 66

US Naval Dental School, Bethesda, Md., USA

Lt-Col HR Kettlys - Fixed Partial Dentures - 18 Apr - 3 Jun 66

Capt JJB Houde - Fixed Partial Dentures - 18-22 Apr 66

RCDC School - Camp Borden, Ont - Officers' Casualty Care Course and Officers'

Clinical Course - 14 Feb - 18 Mar 66

Majs GIJ Bisailon, RJ Bryant, HG Bunston, VM McMaster, WH Murray, IW Susser

Central Officers' School, RCAF Stn Centralia

Capt CA Casterton - Military Management - Jan 66

Training with Industry - Ritter Training School - Rochester, NY 18-30 Apr 66

Ssgt Hopkins RG

No 1 Dent Eqpt Depot - Camp Petawawa, Ont - Dent Storeman Gp 3 Course 4-29 Apr 66

Cpls Hall MJ, McDonald RW, McRoberts DT, Thompson RE - Gp 2 Course 10 Jan - 22

Apr 66 - Pte Strasdin JA

Junior NCO Course

Cpls Challenger GN, Clark JDW, Danyluck RW, Deveaux CW, Girdlestone TV, Hagglund FN, Kalmel H, MacGillivray JH, McEwen JB, Peck AH, Porteous GW, Sharp NB, Schultz EJ, Timmers PAG, Violette JLA, Ptes Bristow GB, Larouche JA

RCDC School - Camp Borden, Ont - Dental Assistant Gp 1 Course - 21 Mar - 6 May 66

Ptes Anderson GM, Baxter HE, Beauchamp JNC, Bernard PB, Bernier JG, Bowman GW, Clint JE, Cliche JPGA, Cloutier JRA, Delmage RK, Eastabrooks AL, Evans RV, Feeney DC, James TA, Kukurudziak TRJ, Kilgrain BC, Maelde P, McIntosh WR, Mehler PJ, Morin EAJ, Osborne RE, Renwick WH, Scheer RB, Shave CC, Tallack RJ, Vasek JJM, Veilleux JNY, Walker JM

Welcome to the Corps

Capt - EI Gerard.

Ptes - Anderson GM, Bernard PB, Bowman GW, Bowser GG, Burt GR, Butson JF, Cliche JPGA, Estabrooks AL, Evans RV, James TA, Maelde P, Tallack RJ, Vasek JJ, Veilleux JNY.

Part V Dental Nurses - Mrs KA Cameron (4Fd), Mrs EM Patterson, Mrs WA Vaness (4Fd).

Retirements and Releases

Mrs EE Alsop, SSgt Brown AD, Cpl Geddes RL, Dr JP Lantier, Lt-Col JA Lauziere, Sgt McGunigal G, Capt GJ Moore, Miss CD Spurgeon, LAW DA Titus, Pte Vance RF.

Promotions

To Lt - TM Jackson

To Cpl - MacGillivray JH, Mattatall LE, McMillan SJ, Patterson JE.

Vital Statistics

Births

Son - Cpl and Mrs Arsenault JB; Sgt and Mrs King HC; Capt and Mrs DR O'Hara; Capt and Mrs GR Rowe; WO2 and Mrs Therrien JCA; adopted a son - LAC and LAW Titus; Cpl and Mrs Veinot RD; Capt and Mrs BH Weeks.

Daughter - Sgt and Mrs Dawson WR; Sgt and Mrs Hill DF; Cpl and Mrs Walker RS; Sgt and Mrs Werkmann AE.

Marriages

Pte Bristow GB to E Pauline Johnston; Sgt Flesher LG to Mrs Katherine Mary Waldbauer; Cpl MacLean LI to Miss Donna Norton; Capt JML Rochefort to Miss Emilie Robert.

Deaths

Deepest Sympathy is extended to Pte Wesley JA on the death of his wife, Lorraine.

- Cpl Bussell WE - mother
- Sgt Grundy FG, Capt MD Taylor - father

Notice

Greetings received from the Minister of National Defence.

"For Brigadier KM Baird, OBE, CD, Colonel Commandant, RCDC from Minister of National Defence. My very best wishes to you and all ranks of The Royal Canadian Dental Corps on the 51st birthday of your Corps, 20 April 1966".

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Quarterly

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Cover Photograph

The beach at El Arish - Egypt

CANADIAN DENTAL DETACHMENT (UNEF) MIDDLE EAST

Major A.L. Kelland, CD, DDS, BA, BED

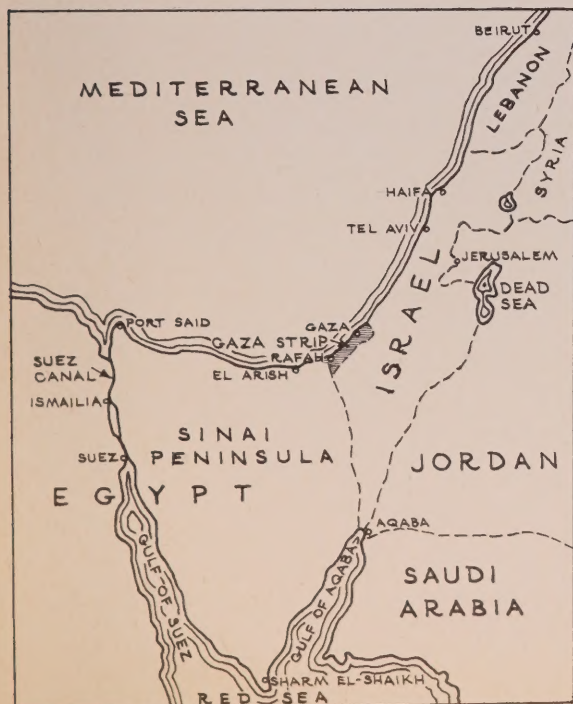


BACKGROUND

Canadian Forces have formed a component of the United Nations Emergency Force (UNEF) in Egypt ever since its inception approximately ten years ago. Some readers may wonder why it became necessary to form UNEF, and why Canada has taken a particularly active part in its function. A brief history of events leading to the Suez Crisis of 1956 seems appropriate.

The Jewish race has had a troubled history for many centuries. Palestine, that narrow strip of land hemmed in by the Mediterranean to the West and to the East by Lebanon, Syria, Jordan and Egypt, was for many years a part of the Ottoman - Turkish Empire. It was liberated during World War I and the League of Nations granted Great Britain a mandate to govern and administer the territory for a thirty-year period. One of the terms of the mandate was the implementation of the "Balfour Agreement", the main tenet of which was the establishment of a national home for the Jews in Palestine.

In 1948 Great Britain relinquished her mandate, withdrew her troops and the United Nations established the State of Israel. Since that time there has been no real peace between that country and its Arab neighbours by whom it is virtually surrounded.



Israel occupies much of the territory previously called Palestine. With the formation of the new state thousands of Arabs who had shared the area with the Jews for generations were either forced or persuaded to move. These refugees now live in concentrations in Lebanon, Jordan, Syria and the Gaza strip. Although the United Nations Relief and Works Agency (UNRWA) assists them by providing food, shelter, clothing and attempting to rehabilitate them, they are an unhappy group of people thwarted in their efforts to return to what they consider their homeland, and purposely not integrated and settled in the countries in which they exist. This situation helps to provide a continuing contentious problem used by the Arab states to maintain a sense of unrest and pressure on Israel. Approximately 300,000 of these Palestinian refugees live in the Gaza strip alone.

Following the establishment of the State of Israel, until the first week of January 1949 there was open warfare between Jews and Arabs. Armistice agreements were negotiated between Israel and its four Arab neighbours with the assistance of the United Nations Acting Mediator on Palestine. For several years these armistice agreements prevented major hostilities from being resumed, but they proved inadequate to prevent civilian and military raids across the borders. On the one hand the Arab states continued to regard Israel as an illegal creation whose very existence they believed to be a threat to their own economic and political security. On the other hand Israel saw what she believed to be her just right to live and develop threatened by inveterate Arab hostility, including threats to exterminate her.

Among the obstacles to development which the Israelis encountered was an effective economic boycott imposed by the Arab States, in particular the Egyptian action in denying the use of the Suez Canal to Israeli ships and to ships of other nations carrying oil and certain other cargoes to or from Israel. In 1951 the Security Council of the United Nations adopted a resolution calling on Egypt to end its embargo on shipping bound for Israel. This issue was raised again later but no resolution was forthcoming because of the Soviet Union's use of the veto.

By a presidential decree in July 1956 the Egyptian Government nationalized the Universal Company of the Suez Maritime Canal. This sudden arbitrary move to expropriate the Suez Canal aroused fears that its future use by all nations in peace and war without discrimination had been prejudiced. The right to use this waterway, constructed by international agreement and with international co-operation had been guaranteed by treaty. Steps organized by France, Britain and the United States to bring about a satisfactory solution to the problem failed.

Provoked by the seizure of the Canal and with evidence of active Russian support in Egypt, on October 29 Israeli forces launched a major attack against her and advanced deep into the Sinai Peninsula. Britain and France called upon Israel and Egypt to cease hostilities and announced that unless the combatants complied with this ultimatum and withdrew their forces ten miles from the Suez Canal, British and French forces would intervene. They stated that the outbreak of hostilities "threatens to disrupt the freedom of navigation through the Suez Canal, on which the economic life of many nations depends." The ultimatum was accepted by Israel whose forces had come within ten miles of the Canal, but was rejected by Egypt; and following that rejection the British and French forces intervened by air and later on the ground.

Canada's policy at this time was to try to stop the fighting by urging United Nations action. In the UN General Assembly Canada sponsored a resolution calling for a plan for setting up an emergency international United Nations police force with the consent of the governments concerned. On November 4 the Emergency Session approved a resolution sponsored by Canada, Columbia and Norway which endorsed the Secretary - General's plan for a UN police force and appointed a Canadian, Major General E.L.M. Burns as Chief of the United Nations Command with authority to organize an international force. The function of the force was to secure and supervise the cessation of hostilities, to police the Zone between opposing forces and prevent the recurrence of the fighting.

CANADIAN PARTICIPATION

Prime Minister St Laurent made the following announcement November 7 on Canada's participation in the United Nations force for the Middle East: "...the Canadian Government has agreed to make an offer of a Canadian contingent to the Emergency International United Nations Force for the Middle East...of battalion strength, augmented by ordnance, army service corps, medical and dental detachments to ensure that the battalion group is self-contained and can operate independently from a Canadian base."

The main body of the Administrative Group (240 all ranks) concentrated at No 25 COD Montreal. Included within this group was a dental detachment, composed of - Major FS Sills, Sgt M Fediuk, Sgt C McFadden and Pte G Lepire (RCASC attached driver). This marked the formation of the Canadian Dental Detachment (UNEF) which has been serving with the Canadian troops in the Middle East since that time.

Transportation to Egypt from Montreal was by RCAF 426 Squadron. En route stops were made at Gander, Lajes Azores, Gibraltar and Naples. From Naples the group departed by Swiss Airlines for Abu Suweir, Egypt.

ABU SUWEIR

The Canadian UNEF troops on arriving in Egypt were billeted in part of an abandoned RAF station at Abu Suweir, located 15 miles West of Ismailia and about 60 miles East of Cairo. Accommodation and sanitation facilities were in a deplorable state of disrepair. The immediate problem was one of cleaning up and making the accommodation habitable. Canadian OCs were advised that stores and supplies would be requested through UNEF Headquarters and that support from now on would be a UN responsibility.

During those first hectic days when everything seemed to be in a state of confusion, a one-room dental clinic was set up and in operation within 24 hours after arrival. Major Sills used his field unit with Sgt Fediuk pumping the foot engine, and regular dental sick parades were held from the beginning.

After numerous "O" Groups, on November 29, better clinic accommodation was allotted to the dental detachment consisting of two 10' x 15' rooms with cement block floors, plaster walls, poor lighting and no plumbing. Everything was dirty and dusty, so detachment personnel set to work scouring and cleaning the accommodation. This all seemed rather futile, because two days later the clinic was moved to better accommodation - this time with two large and two small rooms with plumbing facilities, electric power, and storage space.

As far as dental stores were concerned, the detachment had on hand and in transit sufficient stores to last for a two-month period. These "in transit" stores arrived on 12 Jan 57 aboard HMCS Magnificent along with the main body of the Canadian contingent.

The role of the Cdn Dent Det at this time was to provide comprehensive treatment for approximately 1000 Canadian troops plus 100 Indian troops and any overflow or referrals from the other contingents.

Because of a shortage of dental supplies in the other national contingents the CO of the Cdn Dent Det was requested by HQ UNEF to compile an indent for dental stores and equipment for the six dental officers in UNEF, (Canadian 2, Columbian 1, Yugoslavian 1, Danish 1, Swedish 1) sufficient to last for a three-month period based on Canadian standards of treatment. The UNEF Commander appointed the CO of the Cdn Dent Det as Senior Dental Staff Officer (SDSO) for UNEF. In this capacity, among other added responsibilities, he became Senior Dental Advisor to HQ UNEF.

Dental stores and equipment purchased by UNEF were to be held at the Base Medical Equipment Depot with which the dental stores section was located, and all issues of dental supplies were to be actioned only on the authority of the SDSO.

Within the Cdn Dent Det itself, progress was being made on accommodation improvements. The Royal Canadian Engineers constructed laboratory benches and cupboards which were installed in the laboratory and clinic proper. The necessary barrack stores including filing cabinets, folding tables, office desk etc. were obtained. The Canadians had the only lab facilities.

THE MOVE TO RAFAH

On March 1 the Israel Foreign Minister announced her government's plans for full and prompt withdrawal of Israeli forces from the Sharm al-Shaikh area and the Gaza strip. This announcement was made on the assumption that on the withdrawal of Israeli troops the United Nations Forces would be deployed in Gaza and that its takeover from the military and civilian control of Israel would be exclusively by UNEF.

When other UNEF contingents moved into the Gaza strip to take up their responsibilities, it was realized that the Canadian contingent, operating the maintenance area for all stores and equipment for UNEF, was too far removed from the rest of the Force. The excessively long lines of communication from Abu Suweir to the Gaza strip area taxed transport facilities and reduced its efficiency in supplying the Force.

An abandoned British army camp at Rafah, located in the Gaza strip, was considered to be adaptable to Canadian requirements and a move to that location was initiated.

The SDSO made a recce for dental accommodation at Rafah and selected a self-contained six room building which was in dire need of cleaning and repair. Every room was filled with trash and debris, all wiring and wall plugs had been ripped out, the doors, windows and sashes had been destroyed or stripped, and there were no plumbing facilities. Obviously the natives, many of whom must have lived there, hadn't left any item of value in this abandoned British camp.



Building with burned-out appearance selected to become the dental clinic when Camp Rafah was taken over by Canadian Base Units.

The UNEF Base Medical Equipment Depot was to be located in a similar building adjacent to the dental detachment and the dental stores section was to be allotted a store room there. Dental and medical sleeping quarters were also available in a similar building within the dental detachment area.

As soon as the dental personnel had arrived in Rafah, a unit "self help" programme was instituted with the aid of civilian workmen. The clinic was cleaned and set up, screening and lumber were obtained for the windows and doors, water sumps started and latrines excavated. The engineers (RCE) installed electric wiring and equipment for the two treatment rooms. Power at this time was provided by a 2.5 kw generator supplied by the Ordnance Corps.

With the establishment of the Cdn Dent Det at Camp Rafah, a new chapter in its history was begun. From a makeshift existence at Abu Suweir there was now sufficient space to work and billet personnel as a complete unit. From that time, knowing that this would be "home" for the detachment during its time in Egypt, both the clinic and living accommodation were continuously improved, as was morale and overall working efficiency.

THE GAZA STRIP

During practically all of its ten year existence, most of the national contingents of UNEF including the Canadian Base Units have been located in or adjacent to the area known as the Gaza strip. A brief description of that area will help to give readers an impression of conditions under which the Force

lives and carries out its tasks.

Prior to the formation of the state of Israel, this piece of land 28 miles long and three to seven miles wide was part of Palestine. It is desert country, bounded by the Mediterranean Sea to the West, by Israel to the North and East, and by Egypt to the South. The strip is the crowded home of about 400,000 Arabs, three-quarters of whom are registered refugees from what is now Israel and whose leaders insist that Gaza is only a temporary home. It might be considered as a pawn in Arab-Israeli hostility. This area was overrun by the Israeli Army during the 1956 invasion of Sinai. Many of the mines planted in the desert at that time are still there, and it is not uncommon for a camel to be blown up by stepping on one of them.



Familiar sight on the road between Rafah and El Arish.

As already mentioned, the many thousands of refugees in this area are supported by UNRWA which provides them with food, shelter and clothing, but they are an unhappy, discontented group of people, unable to support themselves on land which was incapable of providing for the previously smaller population. Neither

Israel nor the Arab states have attempted to rehabilitate them. Israel contends that for internal security and political stability the refugees cannot be re-admitted to the present state of Israel.

The city of Gaza is very ancient and is mentioned in the Bible. According to tradition it was here that Samson toppled the temple and in so doing, not only killed himself, but took many Philistines with him.

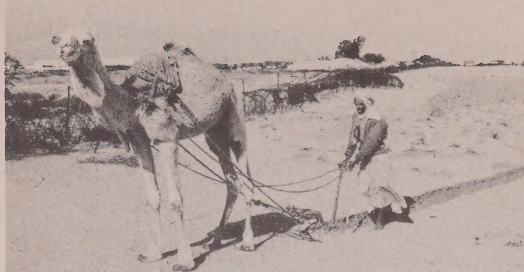
The boundary between the Gaza strip and Israel is fixed by a line known as the Armistice Demarkation Line. (ADL). Physically, the ADL is a three foot wide ditch running throughout its 35 mile length and is manned by 73 UNEF observation posts. Inhabitants along the ADL must remain a distance from it of 500 meters by night and 50 meters by day. The object of course is to discourage illegal entry to either country and prevent border raids and skirmishes.

The International Frontier (IF) separates Egypt from the Gaza strip and Israel. It starts at the Mediterranean Sea and for the first seven miles separates Egypt from the Gaza strip, then it intercepts the ADL and continues 120 miles south to the Gulf of Aqaba. Various sections of the ADL and IF are the responsibility of the national contingents of UNEF.

CAMP RAFAH

Camp Rafah covers an area of 260 acres of flat sandy desert. It is situated just inside the Egyptian border adjacent to the Gaza strip. The landscape is dotted by many whitewashed buildings and the main thoroughfares are paved. An outstanding landmark in the camp is its high water-tower which can be seen for miles in all directions. It supplies water pressure for the camp and is also a watering point for the surrounding Bedouin tribes. At certain times any day one can smell, see and hear groups of Bedouins with their camels and asses getting the daily supply of water (spillage from the tower) in earthenware jars.

Just over the perimeter fence and close to the dental clinic in Camp Rafah, an Arab tills the sand with his ancient plough.



The camp is surrounded by a barbed concertina wire fence. Strategically spaced along its length are a number of manned watch towers with spot-lights which illuminate the fence at night. This very rigid system of security was devised to prevent local Arabs from entering the Camp and stealing personal and UN property. However, even these measures have been thwarted on many occasions.

CONSOLIDATION OF UNEF DENTAL SERVICE

With all UNEF contingents concentrated either within or near the Gaza strip, a firmer UNEF dental policy was requested by the UNEF Commander. This gave the SDSO added responsibilities which included:

1. inspection of UNEF dental detachments and assisting them in administration when possible;
2. provision, maintenance and disposal of dental records;
3. preparation of amendments to UNEF dental policy instructions, dental stores instructions, and a catalogue to dental stores.

At that time national contingents from the following countries had dental detachments: Canada, Norway, Denmark, Sweden, Columbia, Brazil and Yugoslavia.

In November 1957 the Cdn Dent Det's strength was increased so that it included three dental officers, three dental assistants, two laboratory technicians, one clerk (admin) and one storeman.

TREATMENT RESPONSIBILITY OF CANADIAN FIELD DENTAL DETACHMENT

The Cdn Fd Dent Det provided comprehensive dental treatment for all Canadian personnel in UNEF including 115 ATU (RCAF) at El Arish and smaller groups at various distant points:- the RCAF Group, Naples (closed down Jan 58); RCASC Group, Port Said; and the RC Sigs Group, Sharm al-Shaikh, Egypt. Treatment was also provided for the Indian contingent and for the International Staff (civilians) of UNEF and UNWRA. Local native employees were given emergency treatment. The Cdn Dent Det thus provided treatment for approximately 2500 personnel. Complete, comprehensive dental treatment has always been available at the Canadian dental clinic. On this account many referred cases considered beyond their scope have been accepted from other contingent dental officers. Much laboratory work has been done for the other contingents by the Canadian detachment.

The recent return to Canada of "A" Squadron, 8th Canadian Hussars (Princess Louise's), marked the end of nine years of desert patrols for Canadian Reconnaissance Squadrons (RCAC) based at Rafah. The number of Canadian troops in Egypt has been reduced to approximately 800. This, along with other reduced commitments prompted a corresponding reduction in the Detachment of one officer, one assistant and one technician (lab).

Since 1956 the clinic working day has fluctuated from a full day to half a day, determined by the weather and seasons of the year.

ACCOMMODATION

Both the clinic and living quarters for the Detachment have been contin-

ously improved since they were occupied in April 1957. While most of the basic construction has been done by the Engineers (RCE), many improvements within the living quarters have been done by detachment personnel during off duty hours.



A view of the dental living quarters for the men. The clinic is a similar building to the right of this one, and between the two buildings there are trees and shrubs.

Since those early days when foot-engines were pumped and plumbing was non-existent, Rafah now has a reasonably well equipped clinic. The list of facilities and equipment installed since that time includes: the clinic wired with 110 and 220 volt lines, fluorescent lighting, a

dark room, air conditioning unit in the laboratory, dental cabinets, operating lights, hydraulic dental chairs and airtors. The Canadian Detachment is more fortunate than others in UNEF in that some items of equipment have been supplied from RCDC resources.

In the OR's quarters, among other improvements, false ceilings were installed to make them cooler and the verandah was screened in, thus allowing the men to sleep out-doors during the warm summer nights without being molested by mosquitoes.

RECREATION AND LEAVE OPPORTUNITIES

During the summer season most Canadian personnel take advantage of the shorter working hours and spend their afternoons on the lovely sandy Mediterranean beach close by. The natives apparently don't appreciate their beaches and don't believe in bathing, but Canadians and other UNEF personnel make good use of them. Camp Rafah boasts a newly constructed outdoor swimming pool adjacent to the dry canteen.

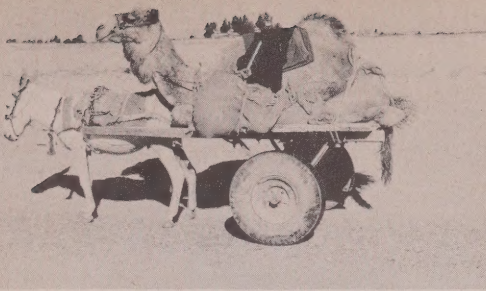
Within the confines of Camp Rafah there is an 18-hole golf course and this sport has proven very popular with dental personnel. There's no shortage of sand-traps on the fairways, and one doesn't have to worry about replacing divots.

Softball, volley ball, badminton and tennis are also played as inter-unit sports both within camp and between the other national contingents.

Evening recreation is largely confined to an outdoor movie or to other mess activities such as bridge, cribbage or darts.

While in Egypt, every serviceman qualifies for one month's leave which must be taken while there. This leave is usually taken in two-week periods at the organized leave centers. The summer leave center is located in Beirut, Lebanon, and the winter leave center in Cairo. There is no charge to UNEF personnel for accommodation and meals at these centers and tours are arranged to places of interest for a nominal fee.

Besides the leave period described, the serviceman is allowed four organized tours, each of three or four days duration. These tours are not counted against leave. For example, a tour may be taken to Jerusalem on this basis. These tours, however, must be approved by UNEF Headquarters before permission is granted to attend, and there is a minimum attendance requirement.



RDCD personnel who have had the opportunity to serve in Egypt have found it an interesting experience. Not only have they had a chance to serve Canadian servicemen in a distant land, but they have also been able to meet and work with military personnel from several nations. The many ancient historical places within short range of Gaza, coupled with the liberal leave policy help to make what might be anticipated to be a lonely, boring tour of duty, one of great interest.

Personnel who have Served with the Canadian Dental Detachment - UNEF

1956-57

Major PS Sills
Sgt Fediuk MM
Sgt McFadden EE
Sgt Mongeau JAM
Capt DE Williams
Sgt Brown AD

1957-58

Major Kettys HR
SSgt Shaw VH
Sgt Arnsby WJ
Sgt MacDow CE
Cpl Cordeau RNJ
Capt Perry RG
Capt KN Munro
Sgt Tapp JM
Cpl Jollimore GD
Cpl Pentz RA

1958-59

Cpl Semple A
Sgt Tait AJ
Major G MacDougall
Sgt Bush BG
Sgt Casson DD
Cpl Matheson RF
Capt JJN Wright
Capt FC Buschlen
Cpl Jennings GR
Sgt Dean MG

1959-60

Capt JS Davis
Cpl Eastwood CC
Cpl Jermain EA
Sgt Crockett MD
Major DJ Carmichael
Sgt Shand G

Sgt Minelli JV
Cpl Lowery RJ
Capt LA Reynolds

1959-61

Cpl Broomfield JWW

1960-61

Cpl MacCuish G
Capt BA Gaudet
Major JCE McDonald
Sgt Petersen NC
SSgt Gagnon AJC
Cpl Gardner ADT
Capt R Lanthier
Sgt Harmer WG

1961-62

Sgt Reid HEW
Cpl Machee JG
Sgt Christiansen JA
ASgt Martell CM
Capt RDH Bunt
Cpl Giles EW
ASgt Drawe HK
Major EJC Small
ASgt Boulanger JIJ
Capt FC Arpin
Cpl Strub AL
ASsgt Schell EL

1962-63

Sgt Storms GH
ASgt Dancer G
Capt GMD Conrad
Cpl Moran DT
Major AL Kelland
ASgt Dion J
ASgt Fox F
Cpl Dumas FJ

Canadians have served with UNEF in Egypt for nearly ten years. During that time there seems to have been little or no improvement in relations between Israel and her Arab neighbours. It seems likely that the Force will be required to remain there for some time to come.

Capt JOL Bourget
ASsgt Murley DT

1963-64

Sgt Shechosky G
Sgt Sprathoff EFH
Cpl Vandervaat B
Capt RJ Faturel
Major RJK Fyne
Cpl Johnson RB
Sgt Sapergia G
Cpl McDonald RW
Capt JLY Cyrenne
ASsgt Roberts HW

1964-65

Sgt Chase WF
Sgt Reid FJ
Cpl Wylie WL
Capt AF Dailyde
Major TC Gaudet
Cpl Hannay B
Cpl Herrett TJ
Sgt Green AH
Capt JHG Charron
Sgt Shappee KR

1965-To Date

ASgt Sabine-Rasley CStC
SSgt Raymond JE
Sgt Beattie ES
Capt JA Nattress
Major JCRR Roy
Cpl MacLean LI
Cpl McKay DH
Cpl Lindsay RS
Capt RW Chernesky
ASsgt Kay JH
ASgt Stenabaugh RH
Cpl Eady NAJ
Major GIJ Bisailon

Major W.A. Sugars, DDS



ACKNOWLEDGEMENT

This article is based on a series of two lectures delivered by Dr. L.S. Fosdick, Professor of Chemistry, Northwestern University, at the Montreal Dental Club Annual Fall Clinic 1965.

THE NATURE OF TOOTH ENAMEL

Present thinking concerning the control of dental caries revolves around the concept that the enamel of a tooth behaves like a semi-permeable membrane, and that it matures with time, becoming more resistant to the destructive effects of acid with age.

In order to appreciate what happens to the enamel of a tooth when exposed to the fluids of the oral cavity the nature of the exposed tooth structure must be understood.

Enamel is composed of two primary substances:

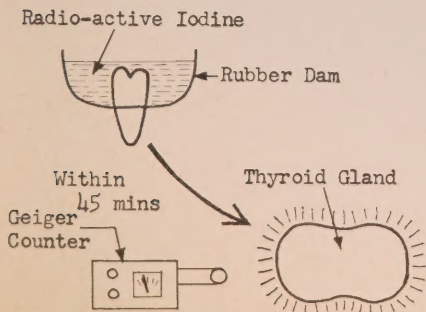
1. Enamel rods, which are dense and largely inorganic in composition and honey-combed in shape.
2. Inter-rod substance, which is more organic in composition than the enamel rods but also contains Ca, P and other minerals. This forms a sheath around the rods, binding them together.

When a tooth is attacked by caries it is this inter-rod substance that is destroyed, with the subsequent loosening and dropping out of the enamel rods. Some feel that the organic component of the inter-rod substance is first dissolved, while others feel that the inorganic component is the portion destroyed.

THE ENAMEL OF A TOOTH IS A SEMI-PERMEABLE MEMBRANE

The enamel of a tooth is a semi-permeable membrane. This has been verified in vivo and in vitro:-

In Vivo



If the enamel of a tooth in an experimental animal is isolated by means of the rubber dam and sealing wax and is then bathed with radio-active iodine for about forty-five minutes, the radio-active iodine will appear in the thyroid gland where it may be detected by geiger counter. This clearly demonstrates that the radio-active iodine has been able to penetrate the enamel, pass through the dentine, and via the circulatory system concentrate in the thyroid gland.

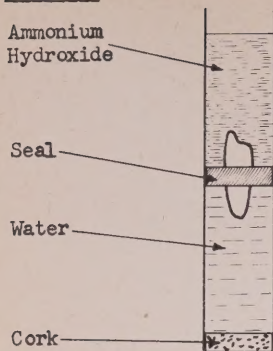


Fig. 2

If a sound tooth is placed inside a glass tube which is open at both ends so that the root portion of the tooth is completely isolated from the crown, and if water is placed in contact with the root portion, and ammonium hydroxide with the enamel portion, quantitative chemical analysis indicates that the usual laws of diffusion are obeyed. In general, the rate of diffusion is a function of age. The young tooth is much more permeable than the old tooth.

MATURATION

The enamel of a tooth matures with time and in so doing acquires a certain degree of immunity or resistance to dental caries. This is an observation that every dentist has made at some time or other. The simplest and most obvious reason is that with time all the pits and fissures where caries can start are drilled out and filled with amalgam or other filling material by the dentist. The other reason, neither so simple nor so obvious, is that the tooth has changed chemically.

If three perfectly sound teeth, one twenty years old, another ten years old, and a third an impacted third molar that has just been extracted and has not been exposed to the fluids of the mouth up to the time of its removal, are placed in three separate test tubes and the experiment as in figure 2 carried out; it will be found that the impacted third molar will have the fastest rate of diffusion and the twenty year old tooth the slowest, indicating that as the tooth gets older it becomes less permeable.

When a tooth erupts and comes into contact with the saliva, since there is an osmotic differential between saliva and the dental lymph at the D.E. junction, a migration of ions commences through the enamel.

If a membrane is homogeneous, the migration will take place through the so-called pores of the membrane. But if the membrane is heterogenous, as with enamel, one would expect that the migration would be selective and would occur through the lines of least resistance. In enamel, one might expect this to be through the less dense rod sheath and inter-rod substance.

Many ions such as Ca^{++} , Mg^{++} , CO_3^{--} and PO_4^{--} , during migration could become trapped in the enamel sheath and inter-rod substance. These ions could be adsorbed on the interface of the apatite crystals and could continue to calcify these areas. This may explain the marked decrease of permeability with age, and with it the increased resistance to the action of acid and dental caries.

CARIES AND DEAD OR DEVITALIZED TEETH

One of the enigmas of nature is that when alive, man's teeth often decay readily; whereas after death and burial his teeth are more resistant to the ravages of time and decay than are other parts of his body. The answer of course is that the non-vital tooth is not exposed to the infiltration of chemical substances because the osmotic differential is no longer active. The inorganic content of the tooth therefore remains relatively stable.

A devitalized tooth with a sealed pulp chamber does not exhibit characteristic

dendron or finger-like decalcification. It does decay, but does so on a broad and even plane. A devitalized tooth becomes dehydrated and intensely brittle due to the absence of osmotic differential and the passage of fluids through the enamel.

THE ROLE OF FLUORINE

The action and reason for the effectiveness of fluorine can now be more readily understood.

When a tooth is exposed to fluoride ion, it penetrates the enamel following the lines of least resistance, i.e. the rod sheath and inter-rod substance. It penetrates only until it reacts with calcium, or the apatite interface or crystal. Thus, the distribution of fluoride in the enamel must be confined to the surface of the rods and to a variable depth along the sheath and inter-rod substance. The ions adsorbed on the interface of the apatite crystals apparently continue to calcify these areas and decrease the permeability of the enamel, thus accounting for the accompanying decrease in caries activity.

Hence, the artificial use of fluorine simply accelerates the maturation process so that it occurs at a much earlier age, thus inhibiting caries.

Whether fluorine is added to the water supply or used in tablet form it finds its way into the saliva and acts in the manner described.

Should gingival tissue recede rapidly, exposing tooth structure which has not benefitted from the maturing influence of saliva, rampant caries characteristic of "senile decay" may result.

THE ROLE OF SALIVA

Saliva is a super-saturated solution of calcium phosphate. The degree of immunity to caries in an individual is proportional to the degree of super-saturation of calcium phosphate in his saliva.

Normal passive saliva is slightly acid, with a pH of about 6.5, but the pH becomes alkaline when the salivary glands are stimulated and may reach 8.4. Active decalcification does not take place until the pH of saliva has dropped to 5.2.

Calcium phosphate in the saliva normally buffers acid before it becomes strong enough to decalcify the enamel of a tooth. It is evident that saliva affords protection from dental caries.

THE DENTAL FLAQUE

If a tooth with a well-formed microbial plaque inhabited with acidogenic micro-organisms is exposed to concentrated fermentable sugar, the sugar will penetrate the plaque to the tooth surface and ferment to form lactic acid with an H^+ potential of about pH5. Under these circumstances the hydrogen ion (H^+) will migrate into the enamel through the lines of least resistance, the sheath and inter-rod substance. If the latter were composed of pure apatite, one could predict the sequence of events, but it is not pure apatite, and it is the sequence of events in this area which causes much controversy among investigators. In any case, the activity of H^+ is apparently inhibited if the process of maturation already described has occurred.

CONTROL OF CARIES

When considering the control of acid within the plaque, it should be remembered that it is formed within 15 minutes after the ingestion of sugar and

starch, and that it has become dissipated by reaction or infiltration 30 minutes later. This indicates the futility of brushing teeth to prevent caries at times other than immediately after eating.

If it proves to be embarrassing to be excused for the purpose of brushing ones teeth when in company, one can at least accomplish part of the purpose by unobtrusively rinsing with water and swallowing it. The purpose is to rid the mouth of material that can form acid.

The elimination of sugar and starch from modern diets is impracticable. Therefore, the only alternative is to render the enamel more resistant to acids in the plaque by accelerating its maturation rate; and the easiest and best method is by incorporating trace quantities of fluorine in drinking water.

FLUORIDATION

The concentration of fluorine in the water supply should be one part per million, and there is evidence that the resulting reduction in caries may be as high as 80%. It is of most benefit to children because, as already emphasized, the enamel of young teeth is much more permeable than that of older teeth.

To those who object to the incorporation of fluorine into a water supply "because it is a poison", it should be pointed out that fluorine is present in many natural sources of water, and also occurs in a large percentage of food substances.

TOPICAL APPLICATION OF STANNOUS FLUORIDE

The topical application of stannous fluoride is effective in controlling dental caries, particularly when applied to children's teeth and to those with incipient carious lesions.

After stannous fluoride has been used, the dentist should be aware of the fact that the dark line which sometimes appears around a restoration may not be secondary caries but a stannous fluoride stain. Stannous fluoride stains carious enamel.

FLUORINE TABLETS AND FLUORIDATED TOOTHPASTE

Fluorine, when ingested into the body is subsequently secreted in the saliva, and the action of saliva on enamel has been described earlier in this article. Fluorine should be administered in tablet form to children who don't benefit from a fluoridated water supply.

A final aid in caries control, added so that none of the methods at ones disposal will be overlooked, is the use of fluoridated toothpaste which has proved to be of some value.

SUMMARY

Some of the present day thoughts regarding the process of dental caries have been reviewed, the theory outlining the action of fluorine in caries inhibition described, and methods for the control of caries endorsed in view of the scientific background knowledge presently available.

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"The paradox of our age is the enormous gap between our scientific knowledge and skills on the one hand, and our organizational and financial arrangements to apply them to the needs of men on the other."

- --The Royal Commission on Health Services in Canada

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THE CLINICAL GROUP LECTURE

WO2 Fortin R.G., CD
WO2 Fransgrote H.E.G.

Clinical lectures and demonstrations were added to the dental health education program at RCAF Station St Jean, a training establishment, with the aim of intensifying the dental health message for the newly inducted trainee and to further motivate him toward better oral hygiene habits. The lectures are based on established and proven techniques of individual chairside instruction and are given to groups of five to fifteen persons in English and French by a Technical Dental Therapist and a Dental Technician Clinical.

Introduction of this new technique followed a thorough investigation and evaluation of existing methods during which systematic questioning of the recruits revealed a serious lack of retention of the dental health facts given to them during their period of induction.

For several years now a film and lecture have been presented to all new trainees during their initial week in the RCAF, together with a routine dental examination on enrolment. While dental health instruction leaves a definite impact at this time, it nevertheless is in direct competition with a number of ideas and conditions peculiar to the Armed Forces, some of them of elementary military and sociological importance to the individual adjusting to a completely new mode of life. It must be borne in mind that the object of the young man joining the Service is to become part of it first of all. His primary needs are food, clothing, shelter, understanding his place in the organization and fitting in. Only after his personal problems are settled will he respond to and endeavour to participate in those efforts which will result in his becoming an efficient, useful and dependable member of the Armed Forces.

A definite need can be filled by the clinical group lecture, a large number of servicemen motivated and specific problems in the individual emphasized by dramatic demonstrations. Familiarization with the clinic environment and relaxed participation in the discussion of oral hygiene problems and home care measures stimulate positive interest.

The clinical lectures are supervised and arranged in close coordination with the Senior Clinician at RCAF Station St Jean and the Dental Public Health Officer 15 Dental Coy. All RCAF departments concerned responded with interest and made groups of five to fifteen trainees available for this program.

The lecture itself is presented informally, comprising a discussion of dental caries and prevailing periodontal conditions within the group over a one hour period. No definite pattern is followed. The patients are grouped around the chair. This close proximity provides complete control over the group and incites interest by demonstrating modern techniques in today's dental practice. It would be deluding oneself not to realize that concepts of many of these young people about dentistry can still be found to be more than a generation behind the times. In small groups such as these the psychological barrier to coming forward with honest questions in front of others is covered and one can actually note a competition within the group to make intelligent inquiries. This aroused interest is then taken advantage of by seating each person in the chair for a dental hygiene and health examination. Each patient is given the opportunity to decline being examined in the presence of his com-

rades should he consider this an objectionable intrusion of his privacy. However, out of over one thousand patients who attended these lectures not one has refused cooperation or shown signs of resentment. The opposite has been true, especially when dental disease in the dramatic form of rampant caries and progressive stages of gingivitis could be practically demonstrated.

Dental hygiene problems are discussed insofar as they are of general individual concern. Good illustrated charts are used together with models and dental health literature. The presence and removal of supra gingival calculus is demonstrated along with other accretions on the teeth and against the gingiva. The application of good oral hygiene measures is stressed repeatedly and directly related to any dental problems evident in the group. Those patients requiring urgent professional attention, and most are not aware of it, are advised to immediately arrange dental appointments. Dental health is then explained in terms of general health which are more familiar to most young people.

A question and answer period usually uncovers some excuses for poor oral hygiene habits. The need to be resourceful and how to compensate for the "lack of time and facility factor" during stress and strain periods, such as basic military training, is pointed out. It may be of interest to note in this context that, as in modern management techniques, the simplest solution is not necessarily the most obvious to every patient. For example, a toothbrush does not occupy as much space as a pack of cigarettes in any pocket, and a cupped hand can serve as a vessel to drink and rinse from for want of a glass after meals or snacks.

After further impressing upon the young servicemen that knowledge provides a first line of defence against disease they are again urged to follow good oral hygiene practises, to take the dental health message home to their families and to discuss it with their friends.

Several names of the attending students were kept and follow-up questioning was conducted. The answers were very encouraging and according to one young recruit they were not only following an improved brushing schedule, but in competitive emulation were checking each other for the proper brushing technique as well as at the sweet beverage machine.

SUMMARY

The Clinical Group Lecture in dental health has been proven to be a useful tool in Public Health Dentistry at this RCAF Station. The benefits of this technique extend not only to the patient as an individual but to his family and friends in civilian life. It is assumed and can be proven that a better attitude toward health in general was initiated in the young serviceman, thereby easing the workload for the Dental Officer in the RCDC and possibly for civilian dental personnel across the nation, wherever these young men happen to be in the years to come. It is emphasized that by educating the individual in this respect he will become aware of the waste in terms of time, money and inconvenience through neglect; and by practising the principles taught will improve his physical, emotional, economic and social well being.

"If circumstances force a choice between utilizing time for cleaning the teeth or for patient education, the latter would serve better."

-- Glickman I - Preventive Dentistry Symposium July 1964

Major W.H. Murray, CD, DDS



The aim of this synopsis is to familiarize the general practitioner with a simplified method of practising endodontics - the purpose of which is to give confidence that endodontics can and should be made a part of routine general practice. This can be accomplished by logical thinking, the elimination of unwarranted procedures, and placing confidence in the natural defences of the body. The approach to a more simplified method of endodontic treatment depends to a large extent upon confidence placed in new concepts.

The greatest advance in endodontics in recent years has been the re-evaluation of culture technique. Until this came about, there could be no such a thing as simplified endodontic treatment. Studies 1,2,3,4 have shown that culture technique is of very limited value in the practice of endodontics, and therefore there is seldom need for the stringent adherence of the so-called sterile technique, the four folds of the sterile towel, and the time-consuming acrobatics and flourishes of the flaming of instruments, the dipping of files, and the swabbing of the rubber dam.

To-day culture technique gives way to a dependency on the natural defences of the body such as the inflammatory reaction and the granuloma-sterile technique admits more to surgical cleanliness, protecting as it must against cross-infection - and the rubber dam is respected more as a protection against the inspiration of instruments, and tissue damage from medicaments, than as an adjunct to sterile technique.

The final digression from culture technique came about in 1963 when Seltzer, Bender, and Turkenkopf² published the results of their studies on this subject. They found that after endodontically treating approximately 3,000 teeth, some yielding positive cultures and others yielding negative cultures at time of filling, no statistically significant difference was observed in the prognosis or success of repair in either group. They also found that after preparing a number of teeth for filling by obtaining negative cultures, when a final culture was taken just prior to filling, 16.6% of these teeth now yielded positive cultures.

Advocates of culture technique must admit to as many reasons for false negative cultures as for false positive cultures, and that the results derived from culture technique do not indicate the number, type nor virulence of the bacteria present, nor do they give any indication of the resistance or lack of resistance of the body to these bacteria. In short, culture technique is an admirable undertaking in theory but misleading in practice. On the other hand it is becoming more apparent day by day that nature plays an important part in the prognosis of treatment of the infected tooth. It is now considered that the area adjacent to the apex of a non-vital tooth is more often an area of contamination rather than an area of infection, and the normal body response is the formation of the granuloma, a natural defence against the injurious factors within the root canal.⁵

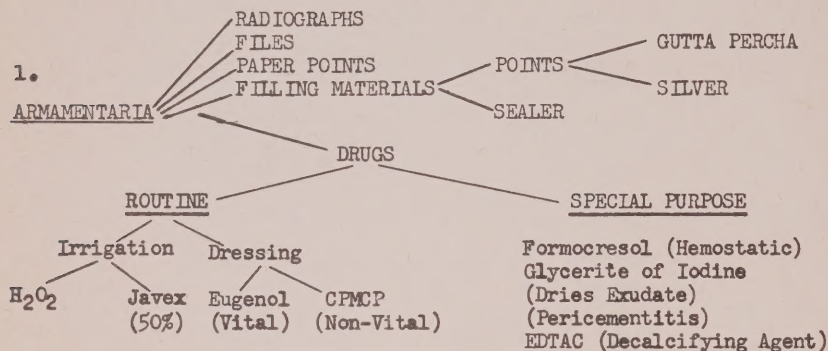
In brief, endodontic treatment is a matter of establishing drainage, cleansing the root canal, obturating the canal with a hermetic seal at the

apex, and thereafter placing a reasonable amount of faith in the reparative powers of the body.

Factors to be considered in this synopsis are:

1. Armamentaria
2. Diagnosis
3. Procedures
4. Technique
5. Differential Treatment
6. Future Procedures

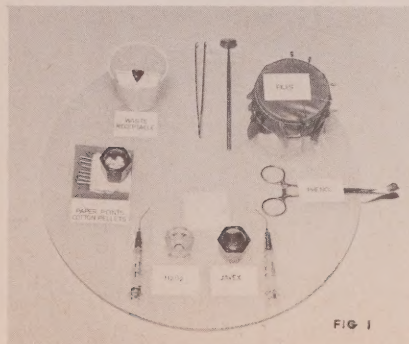
This article is to be considered simply as a refresher to renew interest, or to stimulate more production in endodontics in general practice and therefore it is considered sound policy to present the following context in graphic and abbreviated form in order to enhance rapid assimilation and correlation of the facts.



NOTE: Emphasis should be placed on filing and irrigation to lower bacterial count in canal, dressings cannot be depended on for this purpose, they simply inhibit the growth of bacteria between appointments.

Special purpose drugs are used only on the rare occasion although the chelating agent EDTAC recently has been recommended for routine use as an adjunct to the filing procedure.⁶

The tray set-up illustrated (Fig 1) enhances the use of peripheral vision during endodontic procedures. The tray may be rotated to suit each phase of the operation.



WASTE RECEPTACLE

- Paper Cup-Lip V" D and Bent In.
- Dappen Dish for Ballast.

FILES

- Punctured in Rubber Dam Stretched Over Opening of Anaesthetic Can.

PHENOL

- On Cotton Roll Held in Haemostat.

PAPER POINTS and COTTON PELLETS

- Points (Paper or Gutta Percha) in Fold of Sponge on Rubber Dam Background.
- Pellets in Dappen Dish on Sponge as Ballast.

2.

AIDS — COLD
HEAT
PERCUSSION

DIAGNOSIS

TREATMENT — TRAUMATIC INJURY - Vital Pulpectomy
HYPEREMIA — Pain on Cold Subsides After Stimulus Removed
Sedative Dressing Alleviates Condition
PULPITIS — Pain on Cold and Heat Continues After Stimulus Removed
Pain Spontaneous Especially at Night
RC Therapy Required
PERIAPICAL DISTURBANCE - Pain on Percussion
TRAUMATIC OCCLUSION — PULP DEATH

- Response to Cold and Heat	- No Response to Cold and Heat
- Vital	- Non-Vital
- Grind	- RC Therapy

SELECTION -

Is Tooth Worth Saving

Aesthetics	Continuous Arch	Sufficient Crown to Restore	Abutment for Bridge or Partial Denture
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NOTE: If a vitalometer is available, a final diagnosis is more strongly confirmed.

3.

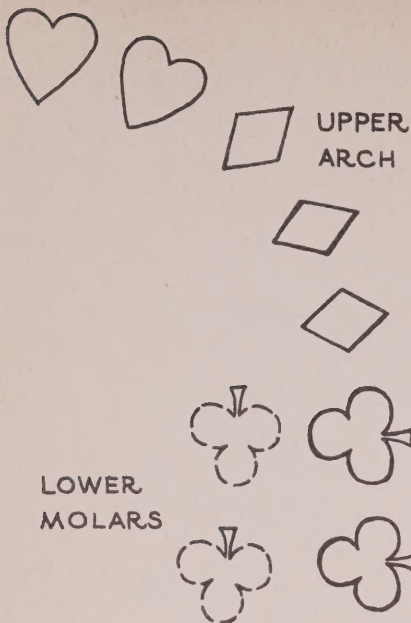
PROCEDURE

OPENING - COMPLETE
START WITH LARGE ENOUGH FILE
COUNTER - ROTATE TO NEGOTIATE CURVE
IRRIGATE FOR LUBRICATION AS WELL AS CLEANSING
NEVER BLOW AIR IN CANAL
NEVER USE SHORT HANDLE FILES UNLESS DAM IN PLACE
THINK DRY CANAL RATHER THAN NEGATIVE CULTURE AS CRITERION FOR FILLING
CHART - NOTE "FOLLOW-UP REQUIRED 6, 12, 18 MOS"
IN REMARKS COLUMN RATHER THAN CURETTAGE OR RESECTION PREMATURELY

NOTE: Openings in anteriors must include pulp horns; and for proper access to canal, lingual ledge must be removed.

A fatality during root canal therapy has been attributed to the excessive use of pressurized air to dry canal⁷. Studies with experimental animals proved that the forcing of air into root canal at 35 PSI pressure caused death in three seconds.

OPENINGS



Outline of openings in the different teeth may be remembered by likening to bridge convention CLUBS, DIAMONDS, HEARTS. The analogy should be continued further by the realization that extensive SPADE work is required after opening, to meticulously cleanse both pulp chamber and canals.

4.

TECHNIQUE

(filling)

SILVER CONES PREFERABLE BECAUSE OF ACCURACY OF FIT AT APEX

LATERALLY CONDENSE LARGE ENOUGH CANALS

LARGE OPENINGS - NOTCH AND WRIGGLE OFF SILVER POINTS

SMALL OPENINGS - IMBED IN CEMENT AND CUT THROUGH

VITAL CASE - FILL $1-1\frac{1}{2}$ MM SHORT OF APEX (APICAL CONSTRICTION)

NON-VITAL CASE - FILL $\frac{1}{2}-1$ MM SHORT OF APEX

CLEAR CROWN TO LEVEL JUST BELOW FREE MARGIN OF GINGIVA

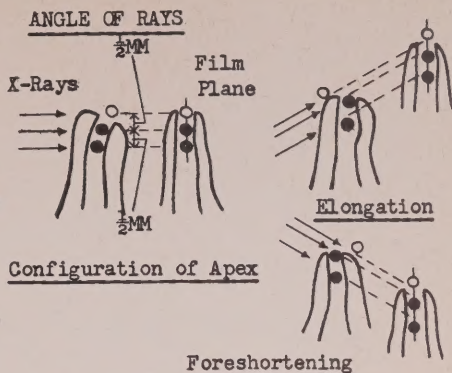
SWAB OUT CROWN WITH DEHYDRATING SOLUTION
3 PARTS ETHYL ALCOHOL (95%) - 1 PART CHLOROFORM

ANTERIORES - FILL CROWN WITH SILICATE (NO CEMENT)

MULTI-ROOTED TOOTH - LEAVE POINTS IN CANALS
CEMENTING ONE AT A TIME TO AVOID CONFUSION

NOTE: As anterior teeth are possible future candidates for post crown restorations it is sound policy to restrict silver point to apical third of canal. Silver points are most easily broken off at this point in canal by work-hardening at notched area before inserting with final cementation. A rotating as well as wriggling motion is necessary to remove butt portion of point with this technique.

Seltzer, Bender and Turkenkopf⁴ determined that for most successful results, the root canal filling should end short of the radiographic apex. Their studies showed that overfilling attained 70.6% success, whereas flush filling attained 86.8%, and underfilling 87.2%. It should be noted that filling flush with the radiographic apex is in most cases filling beyond the actual apex of the tooth with subsequent irritation to the periapical tissues. The following diagrams demonstrate the difference between the true or actual apex and the apex as depicted on the radiograph, such deviation being attributed to configuration of the apex, and elongation or foreshortening distortion due to technique.



5.

DIFFERENTIAL CASE TREATMENT

<u>VITAL CASE</u>		<u>NON-VITAL CASE</u>	
1ST	- Extirpate Pulp	<u>DRY CANAL</u> - File to Apex	<u>WET CANAL</u> - Cleanse to Apical 1/3 of Canal Only
APPOINTMENT	- File to Apical Constriction (1-1½ MM Short of Apex) - Complete to Largest File - Eugenol Dressing 24 Hrs	- Complete to Largest File - If Dry Apex - Fill (½-1 MM Short of Apex)	- Whip 20 File - Leave Open 24 Hrs for Drainage
2ND	- Irrigate		- File to Apex
APPOINTMENT	- If Dry Apex - Fill (To Apical Constriction)		- Complete to Largest File - If Dry Apex - Fill (½-1 MM Short of Apex)
		Dressing Every 48 Hrs Until Dry Apex	

NOTE: Vital case should always require two appointments as extirpation of pulp causes an inflammatory reaction with its associated edema - filling immediately may precipitate a pericementitis.

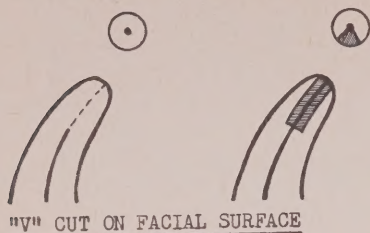
1. CURETTAGE - (Preferable to Apicoectomy) - Remember, Bone Will Regenerate - Tooth Structure Will Not
2. APICOECTOMY - Determine by Follow-Up RA's

6.

<u>FUTURE</u>	<u>SEMI-LUNAR</u>	<u>FLAP ON FIRM</u>	<u>"V" CUT ON FACIAL</u>
<u>PROCEDURES</u> (possibly)	<u>FLAP</u>	<u>TISSUE BUT</u> <u>ABOVE LEVEL</u> <u>OF GINGIVAL</u> <u>SULCUS</u>	<u>SURFACE TO DEPTH</u> <u>OF CANAL PREFER-</u> <u>ABLE TO AMPUTATION</u> <u>OF UNFILLED</u> <u>CURVATURE</u>

3. BLEACHING (No Light Required)

Remove RC Filling to CE Junction	Mix White Paste 2 Drops 30% H_2O_2 + Powdered Sodium Perborate	Swab Chamber with Xylene or Chloroform	Seal Paste in Chamber with ZNO + Eugenol for 3-5 Days - Repeat Until Desired Shade	Before Filling with S Paint Cham- ber with Acrylic Monomer to Seal Tubules and Re- tard Future Dis- colouration
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NOTE: This technique is extremely valuable in the case of buccal roots of upper molars where total resection of unfilled curvature might involve the sinus.

As a final note to this synopsis, it should be made clear that regardless of the non-culture technique requirement, dry heat sterilization of endodontic instruments preparatory to each individual treatment must be observed.

SUMMARY

1. It has been suggested that with the acceptance of a non-culture technique of endodontic treatment, simplification of procedures may be accomplished, and thereby a considerably greater number of teeth may be saved in general practice. This is made possible by a simplified tray set-up, minimal chair time, and fewer appointments.
2. It has been shown that time consuming precise filling of the root canal flush with the radiographic apex is not required and is even contra-indicated. Filling to an arbitrary point short of the apex is a less exacting procedure and is the method of choice.
3. It is recommended that "follow-up" roentgenograms be taken subsequent to filling a non-vital tooth with an area of rarefaction at the apex, rather than curettage or resection of root prematurely.
4. A unique method of eradicating unfilled curvatures near apex rather than total resection of that portion of the root has been presented.
5. A method of bleaching requiring a minimum of equipment and time has also been presented.

Editors Note: There are 8 references. Bibliography supplied on request.

"The professional man has no right to be other than a continuous student."

--- Dr. G.V. Black

Directorate

DUTY TRIPS AND VISITS

Brig KM Baird, Director General of Dental Services, accompanied by Lt-Col LA Richardson CO 4 Fd Dent Coy, Germany, and Capt GR Nye dental officer in charge of the Canadian Dental Detachment in Cyprus, attended the 54th Annual Session of the Fédération Dentaire Internationale held in Tel Aviv, Israel 10-17 Jul 66. In conjunction with these meetings Brig Baird was a discussion leader at the International Conference on Military Dentistry.

DGDS attended the Teaching Conference in Dental Education at the University of Toronto 9-11 May 1966.

DGDS and Col BP Kearney attended the CDA Board of Governors Meeting in Halifax, N.S. 8-11 June 1966.

Lt-Col G MacDougall visited units in Toronto, London, Edmonton and Vancouver as judging officer in the 1966 RCDC Militia General Efficiency Competition.

11 Dent Coy

CONVENTIONS AND MEETINGS

Col GC Evans attended the BC Dental Convention at Prince George 1-3 Jun 66.

EQUIPMENT

One of the mobile dental vans has been equipped with the Encore Mobile Field Dental Unit and dispatched to Vernon Military Camp for the period 4 Jul-26 Aug.

SPORTS

The first Victoria area RCDC golf tournament for the season was held on 29 Apr 66 at the Cedar Hill Golf Course.

12 Dent Coy

CONVENTIONS

Cpts Robertson and Goldberg presented table clinics which were well received at the CDA Convention in Halifax 12-15 Jun 66.

Major GT Crossman and Capt HW Brogan attended the Valley Dental Association meeting in Middleton NS in April. Capt Brogan was guest speaker and his topic was Periodontology.

ARMED FORCES DAY

A dental van equipped with airotor was sent for display to CFB Shearwater for Armed Forces Day 11 Jun 66. It was manned by Major RE Dyer and WO2 MacLean SL.

A dental van was also on display for the same occasion at CFB Gagetown.

SPECIAL EVENTS

Personnel of 12 Coy attended farewell parties in nearly all parts of the

Maritimes as cuff links, lighters, tie pins and beer mugs were presented to the following personnel on their departure on posting: Lt-Col HR Kettys, Cpts N Goldberg and AN Swanzey, WO1 DD Robertson, WO2 Madge CS, Sgts Jermain EA and Grundy FG, Cpls Albertson GG, Danyluck RW and Middleton DF.

SPORTS

Capt AN Swanzey was promoted to Black Belt by the HQ of the Nova Scotia Black Belt Association. He has been grand champion of NS eleven times, one of the most successful instructors in the province and represented the Canadian Forces at the National Judo Championships in Edmonton 21 May 66. Capt Swanzey also recently received the award of Nova Scotia Athlete of the Year from the Nova Scotia Branch of the Amateur Athletic Union.

Major RE Dyer, Cpts N Goldberg and GS Zwicker, WO2 Madge CS, and Cpls Arsenault JB and Deveau CW comprised the winning team in the "B" championship bowling held at Windsor Park, Halifax.

13 Dent Coy

SPECIAL EVENTS

On 20 Apr 66, Trenton area dental officers were hosts to 18 members of the Bay of Quinte Dental Society. During the afternoon and evening clinical papers were presented by Lt-Col JW Turner, whose lectures were of a high calibre and attracted many favourable comments from the civilian guests. Dinner was served for the group in the private dining room of the Officers' Mess.

On 21 Jun 66 a farewell party was held at No 13 Dent Coy HQ for a number of Trenton area personnel leaving for postings to various parts of Canada. Those departing included WO1 RH Daw, HC Bilbey, WO2 Mazerall EE, and Cpls Forsythe GVS and Tweed WE.

A farewell party was held at No 28 Clinic CFB Toronto to mark the departure of Capt WJ Sinclair who has enrolled for post-graduate studies at the University of Toronto.

FLUORIDATION

The SDO No 3 Clinic advises that a new water filtration plant to be constructed at CFB Petawawa will include equipment for water fluoridation.

SPORTS

Personnel of No 13 Dent Coy held a Golf Day at Trenton on 17 Jun 66 which was attended by members from Petawawa, London, Toronto, Kingston and North Bay.

Following the game an excellent dinner was served in the Social Centre and prizes were presented. The low gross was won by Lt-Col GE Windsor and the low net by Capt TC Tervit.

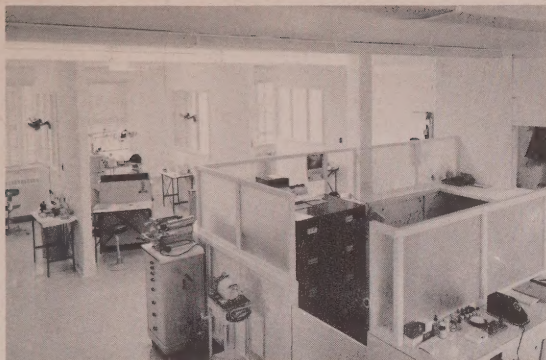
Capt RH Crowson was a member of the Royal Military College Senior Staff basketball team which placed second for the EOA championship.

WO2 Stokes HJ was awarded a trophy for the high average score in his bowling league.

SGT T HUSSEY RETIRES

During the evening following the Golf Day at Trenton on 17 Jun 66, a presentation was made on behalf of all members of the Unit to Sgt Tom Hussey who is retiring after 25 years service in the RCDC. Sgt Hussey is moving to Toronto and will be employed by Denco (Ont) Ltd. Members of this Unit and his many other acquaintances in the Corps wish him well in his new career.

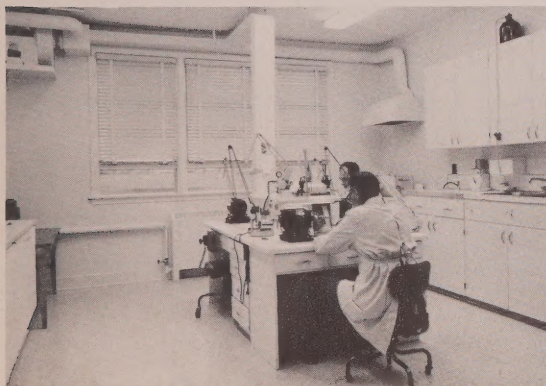
ACCOMMODATION



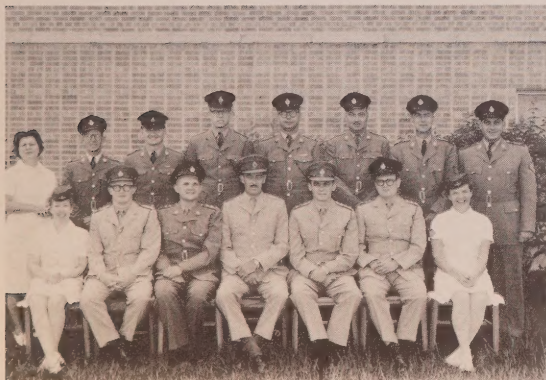
Dental personnel of No 2 Clinic (RCAF Sta Wpg) moved into their new accommodation 29 Apr 66.

This clinic with its many operating bays and some of the most recent dental equipment available has become the "show-case" for No 14 Coy.

One of the interesting features of this excellent accommodation is the centrally located orderly room-reception office around which are mixing areas, autoclave, etc.



Dental Laboratory
No 2 Clinic



Clinic personnel - No 2 Clinic

Front Row - Left to Right
Cpl Boles MN; Cpts GD Petrie, DL Poy; Major RJ Bryant; Cpts JD McCallum, JM Steadman; WO2 Savage P.

Back Row - Left to Right
Mrs L Less; Cpls Morrisette B, Hannah BF, Bristow GB; Sgt Demedash N; SSgt Storms GH; Sgt Fenton DL; Cpl Challenger GN.

SPECIAL EVENTS

No 14 Coy's annual "posting party" for the Winnipeg Area and its close satellites was held at the Horizon Room of the International Airport on 6 May 66. Dinner was preceded by a cocktail hour and followed by an evening of dancing and good fellowship.

CONVENTIONS

Major P Guevremont attended a Public Health Convention held in Quebec City 31 May-2 Jun 66. Forty dentists attended this convention.

ACCOMMODATION

A permanent clinic was opened at RCAF Station Val D'Or, Que, on 24 May 66.

MAJOR WA SUGARS RETIRES

Major Sugars has retired after ten years of post-war service with the Corps. Bill was welcomed back into the Corps in 1956, having had five years of war-time service, and he will soon be associated with the Corps again when he fills the Part V vacancy in Montreal.

A formal mixed dinner was held at 25 COD Officers' Mess to "dine him out" of the Armed Forces on retirement. A Corps crest was presented on behalf of all RCDC officers and a bouquet of flowers to Mrs Sugars.

SPORTS

Cpl JAN Audet participated in a marathon swim at Bagotville 11-17 Jun 66. He placed third among the contestants after swimming 42 1/3 miles and was awarded a second for swimming six miles non-stop.

CARNIVAL ON THE GOOSE

Annually the RCAF Station Goose Bay participates in a Winter Carnival. The aim of this event is to create a break in the long severe winter. The list of events are many, ranging from indoor events such as badminton, swimming and volleyball, to winter sports such as snow shoeing, snow sculpturing, skiing and tobogganing, and finally the social sport of curling. The events are run for one full week with women's events in the daytime and men's events in the evening and weekends. Each Club on the station, that is, Officers, Sergeants, Corporals, Airmen, DND and Squirrel Club (DOT) fields a team. The competition is extremely keen and at times tempers run short and emotions high.

As usual the RCDC staff were active competitors. Cpl Mahlitz proceeded to break all records in all events including the lack of sleep marathon. Capt Dippel, the only Dental Officer in the clinic at the time, spent most of the daytime fixing broken dentures, incisors and bridges. In one case he had to wait two weeks for the contestant to be released from the hospital. In between emergencies he found time to coach the Officers' toboggan team to a close second. WO 2 Tapp took leave in order to participate in both day time and night events in the Sgts' Mess.

Snow sculpturing, which has always been one of the keenest events, received a great deal of the spectator's interest. This year, owing to an extremely mild and snowless winter, huge quantities of snow had to be imported from the American side (this is a change) in order that the would-be snow engineers and sculpturers could show off their art. The DND Club's effort, the crooked house, is shown in the photograph.



TRAINING



Two Militia dental officers attended the RCDC School from 4-8 Jul 66. Col GR Covey, Commandant RCDC School is seen presenting Military Qualification Certificates to ACapt DK Hurst (centre) of 26 Fd Regt, Brandon, Manitoba, and to ACapt C Chicoine of Les Fusiliers Mont-Royal, Montreal, Quebec on completion of the Captain (Dental Officer) Qualifying Course Part 2 RCDC(M).

GREY-BRUCE-DUFFERIN DENTAL SOCIETY VISITS RCDC SCHOOL

On 13 Apr 66 the Commandant and Staff of the RCDC School played host to 20 practising dentists from Owen Sound, Ontario, and the surrounding area. A programme was presented which offered opportunity for the visitors to observe the actual training of auxiliaries with particular emphasis on the Technical Dental Therapist.

Presentations included the following:

Reinforced Pin Amalgams (Lt-Col JW Turner)
Dowel Abutment Crowns (Maj JM Donely)
Controlled Tooth Division (Maj AJ Andrews)
Endodontics Simplified (Maj WH Murray)

The programme continued into the evening with an informal dinner followed by a series of professional films. The programme was organized by Maj JJN Wright.

RCDC SCHOOL GUEST LECTURERS

Lecturers from the RCDC School were active both near and far during the past quarter.

Maj DH Newell - Periodontal Diagnosis to the Muskoka-Simcoe Dental Society on 4 May 66.

Maj JJN Wright - "Diagnosis of Pathological Lesions Affecting the Gingiva and Adjacent Structures" at the 99th Annual CDA Dental Convention at Toronto on 17-18 May 66.

Maj AG Andrews - Modern Concepts of Local Anaesthesia to the USAREUR Dental Conference at Garmisch, Germany, on 26 May 66.

Lt-Col DH Protheroe participated as a member of a panel presentation on Preventive Dentistry at the CDA Convention at Halifax on 14 Jun 66.

LIAISON VISIT

Col WD Love, Deputy Director of Dental Science, MFSS Fort Sam Houston, Texas, made a liaison visit to the RCDC School during the period 27-30 Jun 66. Col Love's visit conveniently coincided with the RCDC School Golf Tournament in which he participated.

SPORTS



The RCDC School held its Annual School Golf Tournament on Wed 29 Jun.

The Fletcher Trophy was won by WO1 Tom Batten with a gross of 79. 2Lt Bill Kearns, 3rd Phase, also shot a gross of 79.

Lt-Col DH Frotheroe congratulating 2Lt Kearns

1 Dent Eqpt Dep

SPECIAL EVENTS

The Depot entered a display for Armed Forces Day held on 8 Jun 66.

SPORTS

No 1 Dental Equipment Depot in conjunction with No 3 Dental Clinic held their annual fishing derby on 22 May 66. WO2 Hutchinson JW was the proud recipient of the trophy for the largest fish.

It seems late in the season to report a curling event, but a rink from No 1 Dent Eqpt Dep won the regimental curling championship in the HQ and Services Curling League in CFB Petawawa. The rink was skipped by Lt TM Jackson and the other members were Maj JW Fletcher, Lt EM Lobb and WO2 Hutchinson JW.

1 Dent Det

A warm welcome is extended to Maj JL Craig, Pte George H and Mrs AB Morin who joined No 1 Dent Det during the past three months.

SPECIAL EVENTS

A farewell party was held at No 13 Personnel Depot for the following members of No 1 Dent Det who will be departing shortly on posting: Lt-Col W Carter, Maj JY Turcotte, Capt BH Weeks, WO2 Mann CD, Sgt Gagnon AJC and Cpl Smith DS.

*

CORPS MEMBERS ARE REMINDED THAT THE ANNUAL RCDC GOLF TOURNAMENT WILL BE HELD AT CAMP BORDEN 23-24 SEP 66.

4 Fd Dent Coy

CONFERENCES AND MEETINGS

On 27 Apr 66 a very successful professional meeting was held in the 2 R22er Officers' Mess. Lt-Col Edmundson RADC Oral Surgery Consultant at BMH Iserlohn presented some cases recently treated at that hospital and Capt Brush, US Army DC, gave an excellent illustrated talk on "Work Simplification in Dentistry".

At the same time the dental NCO study group held a meeting chaired by Sgt Reid. SSgt James briefed the group on rotation procedures and Sgt Christiansen spoke on "Fabrication of Instant Treatment Partial Dentures".

The following dental officers attended the USAREUR Dental Conference in Garmisch, Germany 26-28 May 66: Lt-Col LA Richardson, Maj LA Reynolds, Maj PP Morin, Capts RJ Paturel, DR O'Hara and MD Taylor. Professor Bertram Cohen was the main guest clinician.

SPECIAL EVENTS

The annual rotation party was held at the Castor Club in Werl on 3 Jun 66. An engraved plaque was presented to each of those members rotating to Canada this summer.

SPORTS

A unit sports day was held in the field on 22 Jun 66. Personnel participated in volleyball, badminton and horseshoes. The Sr NCOs defeated the officers' and men's teams -- using a point system designed by the Sr NCOs.

35 Fd Dent Unit

CONFERENCES AND MEETINGS

The Annual USAREUR Dental Training Conference was held in Garmisch, Germany, 26-28 May and was attended by the following dental officers from 35 Field Dental Unit: Lt-Col JC Brick, Maj JOL Bourget, Maj Y Kamachi, Maj DE McDermott.

SPECIAL EVENTS

A Unit farewell party was held in the Social Centre at HQ 1 Air Div on 3 Jun 66 in honour of the following members of the unit who will be rotated to Canada this summer: Maj JOL Bourget, Maj JL Craig, Maj JH Marion, Maj DE McDermott, Capt M Kostyniuk, Capt A Van Ryssel, SSgt White CR, SSgt Shaw VH, Sgt Jennings GR, Sgt McFadden EE.

CBU (UNEF)

SPECIAL EVENTS

Canada Day celebrations were held throughout the Contingent on 23 May 66, the Canadians being hosts to the other contingents at several functions. Members of the dental detachment participated in a monkey golf tournament in which SSgt Kay won the prize for "high hidden hole".

A party was held on 18 Jun 66 to bid farewell to LSgt Ron Lindsay and Cpl Don McKay.

SPORTS

Capt Chernesky was on the HQ CBU softball team, "A" League, which became CBU champions by beating 56 Sig Coy.

SPECIAL EVENTS

St Jean Baptiste Party

On June 24, members of the Camp Maple Leaf (Canoe Club) Officers' Mess celebrated French Canada Day with a St Jean Baptiste party. Representatives from all contingents were present as Father Flourde and Maj Boire led a sing-song of French Canadian songs. The entertainment included lizard races which were a big success. The highlight of the party occurred when St Jean Baptiste appeared and blessed all. By coincidence the occasion occurred on Capt Nye's birthday and St Jean congratulated him on "coming of age"!

From left to right - Capt Geo. Nye DO
St Jean Baptiste (Maj Boire)
Father Flourde
Capt Tud Kaulbach (PMC)

In Memoriam

It is noted with regret that three dentists formerly prominent in the Corps have died recently.

L.E. KENT

Dr. Leonard Ernest Kent, M.B.E., C.D. died on the 26 Apr 66. Born in St Anne de Bellevue, PQ, in 1899, Dr. Kent graduated from the University of McGill in 1923. He joined the Service in 1939 and retired from the Active Force with the rank of Lt-Col at the end of the war. He continued his association with the RCDC retiring from the Reserves in 1959 as a Colonel. Dr. Kent was a past president of the Montreal Dental Club. In 1956 he was honoured with the title Queen's Honorary Dental Surgeon. Following retirement from private practice he was employed on a part-time basis with the RCDC in Montreal.

C.L. STRACHAN

Dr. C.L. Strachan, E.D., died in Victoria Hospital, London, Ontario on 6 Jul 66. He was born in Manitoba in 1898 and graduated from the University of Toronto in 1924. He served with the Active Force 1939-45 retiring with the rank of Lt-Col and continued his association with the RCDC as a Militia Unit Commander and later as Col, ADDS until 1949. Besides his military contribution to dentistry, Col Strachan is remembered for his work representing dentistry on the Hall Commission.

W.G. TRELFORD

Dr. W.G. Trelford, V.D. was born in Ontario in 1891. He graduated from the University of Toronto in 1913 and served with the C.E.F. from 1915 to 1920. Between the First and Second World Wars Dr. Trelford served with the Militia and as a Lt-Col he organized the Dental Coy for MD2 at the outbreak of World War II. He took 1 Div Dent Coy overseas that year and was instrumental in developing the Canadian Dental Increment which worked in the Maxillo-Facial Centre at Basingstoke. Dr. Trelford died in Sunnybrook Military Hospital 7 May 1966.

RCDC SCHOOL - CAMP BORDEN - DT LAB GP 4 COURSE - 9 MAY-17 JUNE 66

Sgts Christiansen JA, Clarke JE, Hill DF, MacKay FD, Reid FJ, Sprathoff EHI, Tremblay M.

Welcome to the Corps

A cordial welcome is extended to the following personnel on their recent graduation and promotion to Captain: Captains HM Amos, JJR Bellerose, JW Bergerman, JLP Berthiaume, JLAR Bourcier, W Budzinski, JAAL Carrier, JAR Fortier, DA Humphreys, RG Kerr, VJ Lanctis, WD MacKenzie, JL McNeil, DC Morgan, GD Petrie, DL Poy, JAR Shearer, JE Stansfield, JM Steadman, BM Trepanier, DG Wilson.

Other new members in the Corps are: Cpts JR Cowan, CL Gullekson, Ptes Boissoneault JMM, Craig MJ, Duffield RG, Hurley A, Lamontagne GRR, Solomon RL, Taylor TH.

Promotions

To Col - SG Bagnall.

To Lt-Col - WH Harrington.

To Major - MN Deyette, L Dombowsky, JJB Houde, JFA Marcil.

To Capt - EA Church.

To SSgt - Chartier CA, Libby GKW.

To Sgt - Kennedy JF, Kerr DL, McDonald RW, Schemlizie CE, Shergold KJ, Walker RS.

To Cpl - Abfalter RF, Boulanger JF, Bosch F, Braslins IA, Bristow GB, Hatcher LR, Jack A, Kukurudziak TRJ, Labrosse JG, Larouche JA, O'Dell RG, Palmer WG, Strasdin JA, Wesley JA.

Retirements and Releases

Cpts LW Armstrong, GJB Dionne, RWR Horn, WR Kyle, NA McFarlane, RT Mori, RFC Oswin, WJ Sinclair, PS Wade; SSgt Brown LG; Sgts Hussey T, Hutton WFE; Cpls Middleton DF, James EC (Airwoman); Pte Lapointe JOM.

Vital Statistics

MARRIAGES

Capt GW Hill to Miss Carolin Joyce Christopherson; Cpl Gratton JRY to Miss Irene Malo; Pte Larouche JA to Miss Rejeanne Chapdelaine.

BIRTHS

Son - Capt and Mrs JEG Brissette, Capt and Mrs WG Ebert; Cpl and Mrs LG Peverill; Capt and Mrs GE Purcell; Capt and Mrs BH Weeks; Maj and Mrs JOL Bourget; Cpl and Mrs TR O'Mara; Pte and Mrs T Taylor; Cpl and Mrs PD Whynott.

Daughter - Cpl and Mrs ML Allen; Capt and Mrs JJLG Girard; Capt and Mrs FH Harreman; Major and Mrs JJN Wright.

*

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NOV 29 '88

The
**ROYAL CANADIAN
DENTAL CORPS**

Quarterly

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Cover Photograph

Dent Unit HQ in Korea inspected by CGS, Lt-Gen Simonds and Bde Comd,
Brig Rockingham accompanied by CO, Lt-Col Shragge

THE RCDC IN KOREA

Col G.R. Covey, MBE, CD, DDS



1950

BACKGROUND

Following the Canadian Government decision in early August 1950 that Canada would actively participate in the police action in Korea, the task of manning such a Special Force began. Within months, a Brigade of ground troops was in Korea; at sea, RCN destroyers were patrolling the enemy coastline; and in the air, twenty RCAF fighter pilots flew with the USAF in sorties against the enemy while RCAF Transport Command pilots were flying a continuous airlift of men and materiel from Canada to Tokyo. In all, Canada's combined effort formed the third largest contingent in the sixteen-nation United Nations Force.

In forming the Brigade, it was decided that the Second Battalions of the RCR, R 22e R and the PPCLI would be brought to full strength, along with supporting arms of one Regiment of Artillery (2 RCHA), Squadrons of RCAC (The Strathconas), RCE and RC Sigs, and the support services of a RCASC Coy (23 Tpt), a RCEME Workshop (191 Wksp), a RCAMC Field Ambulance (25 Fd) and Detachments of RCDC, C Int C, C Pro C, RCAF and Chaplain Services.

ORIGINAL ESTABLISHMENT

The DGDS, Col EM Wansbrough, submitted originally a proposed establishment for the RCDC component to provide an independent Dental Unit of 14 officers and 52 ORs - these numbers being based on dental officer ratios similar to those used during World War II. The dental establishment, however, was reduced to two officers and six ORs to provide only emergency treatment and on 16 Aug 50, the 20 Cdn Fd Dent Det was approved by the War Establishment Committee with a complement of two Capt DOs, four Sgts and two lte drivers. During Sep 50, the personnel selected for the Detachment were "staged" at the RCDC School in Ottawa and consisted of Capt FM Nesbitt, his dental assistant ASgt DLG Flesher and Lab Technician Sgt WB Gilbert, Capt JR Harms and ltes WCH Sawyer and G Jennings.

FORT LEWIS

The second "staging area" for the RCDC was located at Fort Lewis near Tacoma, Washington, USA, and it was here on 8 Oct 50 that Capt Nesbitt and his assistant actually set up the first RCDC clinic in the MIR with the assistance of the USA (DC) who loaned him a field chair for the short period he was there. Following Capt Nesbitt's departure for Korea on 21 Oct 50, an increment to the dental establishment was authorized providing for an increase of two Capt DOs, two Sgt DAS, one Sgt DT Lab and two lte Dvrs.

In Nov 50, approval was granted for the OC Dental Detachment position to be up-graded to the rank of Major and Maj LM Gray went to Fort Lewis on temporary duty to fill the position pending the arrival of the newly appointed OC. On 3 Dec 50, Capt HS Lankin was promoted to A/Major, posted to 20 Cdn Fd Dent Det and dispatched to Fort Lewis to relieve Maj Gray. In those days the greatest problem at Fort Lewis was the large sick parade - 70 to 80 troops per day whose primary requirements were dentures. This problem was magnified by

the short period of the troops were there - the PPCLI for example was in Fort Lewis for only three days!

1951

On 9 Feb 51, the dental establishment was raised to 11 officers and 40 ORs, and on 20 Feb Lt-Col GE Shragge joined the Detachment as the new CO. By the end of the month all equipment and stores had been collected, which as a matter of interest included 60 pairs of Ordnance boots, all size eleven! On 13 Mar 51, a new establishment was received at Fort Lewis designating the CO as a Major and the Detachment became a self-accounting unit. Departure of the RCDC Detachment from Fort Lewis began on 19 Apr 51 when Maj Brown and his section left for the Far East. On 30 Apr 51 a further group who were to act as an advance party left for Vancouver and finally on 7 May 51 the remainder departed for Camp Wainwright which was to be another "staging" area.

CAMP WAINWRIGHT

The rear party of 20 Cdn Fd Dent Det was stationed at Camp Wainwright from May to Aug 51 pending their transportation overseas. Lt-Col Shragge, having appointed Maj Lankin A/OC of the Detachment, left the Camp on 21 May 51 for Vancouver, expecting to fly to the Far East on TD. His trip was delayed, however, and he did not arrive in Korea until 8 Jun where for the next three weeks he was quartered with RCEME. Since the CO expected to return to Wainwright to bring over the remainder of the detachment he moved Major Brown to the temporary HQ to act as CO. Lt-Col Shragge arrived back in Vancouver on 4 Jul 51 and proceeded to Ottawa for conference with DGDS.

On Fri the 13th of Jul 51 Maj Lankin was telephoned from Ottawa by Lt-Col Shragge and advised that the Detachment at Wainwright was to be ready to go to Korea by 1 Aug, and of course the morale improved 100% with this news. The CO rejoined the detachment on 27 Jul 51 and on the 12th Aug he left with Lt WJ Thomson to fly to Tokyo as the RCDC advance party from Wainwright. On 21 Aug 51 the main party sailed from Seattle, Wash., bound for Yokahama and thus completed the movement of the RCDC Detachment from Canada to the Far East.

20 CDN FD DENT DET IN THE FIELD

A group of officers
and men -
25 Fd Dent Unit
1953



The history of the RCDC in the field during the Korean affair commenced, as previously mentioned, on 21 Oct 50 with Capt Nesbitt and Sgt Flesher going aboard an American ship. They used the dental facilities available for emergencies during the voyage, a US Ritter unit and chair along with their own "L" kit, and arrived at Pusan, Korea on 12 Nov 50. At Pusan, Capt Nesbitt was again aided by the US Army (DC) with the loan of a portable chair, cuspidor, light and expendable supplies pending receipt of his own field equipment. This generosity permitted him to treat the Cdn personnel until the remainder of 2 PPCLI arrived 22 Dec 50 with their dental detachment, including the mobile but without generator.

On 28 Dec 50 the dental advance party proceeded in convoy with FPCLI HQ Coy to Miryang and on 30 Dec 50 the first regular dental parade was held in the field with the DO working from his "A" Trunk. Over the next few months UN troops had reached the 38th parallel and by 26 Mar 51, the FPCLI including their dental detachment, were just a few miles from this parallel. It was at this time that Brigs J Fleury and Rockingham visited the Bde and Capt Nesbitt's DA, LCpl Sawyer, was placed on the honour guard. Brig Rockingham told the Cpl that he was "the smartest soldier in B'echelon".

Maj Brown and his section with the R 22e R arrived in Pusan on 4 May 51 and his first impression "a glorified slum area gone to the dogs" was considered the classic statement of the year! Capt Donely arrived in Pusan the next day, received his dental van, trailer and generator and with this equipment moved North on 16 May 51 with 2 RCR "at an average speed of 16 mph" to the first staging area - a river bed outside Taegu. From there he continued North to ten miles NE of Suwon, a hazardous trip since he had to get the American Engineers to dig a channel under a low bridge so that his mobile could pass under it!

By 19 Jun 51, "B" ech of the FPCLI, including their dental section, had moved 40 miles from Tokchong to just south of Chonwon (about 10 miles north of the 38th parallel) and the RCR and R 22e R dental sections were within sight at other locations along the road. Capt Nesbitt reported that by 21 Jun the FPCLI had made four moves in seven days with the thermometer registering 102°F in the shade.

CONSOLIDATION IN THE FIELD

The main party of 20 Fd Dent Det, which left Seattle by sea on 21 Aug 51, arrived at Yokahama on 3 Sep and sailed for Pusan where they were met on 7 Sep by Lt-Col Shragge and Lt Thomson. Early Sep 51 was spent getting the vehicles and supplies ready and on 20 Sep the CO and his Adjt/QM led a convoy of six vehicles to dock-side where 147 pieces of baggage were unloaded from the ship and put in the trucks. The next day the convoy started North and 35 miles from Pusan they had to stop because of a broken fan belt (no spares - in fact there were no spare tires and the tires on the trucks were dated 1942). Three days later, however, the convoy arrived in Seoul where the personnel stayed overnight at the Cdn FDS, and the next day went on to Uijongbu and 191 RCME Wksp where they were met by Maj Brown. On 25 Sep 51 Capt Sills took his vehicle to the 2 ROCHA area and Capt Harms proceeded to 25 Cdn Fd Amb. During the period that the convoy was going north, Maj Evans and Sgt Daw left for Kure and the 25 CRG clinic where Capt Crowley was located. Maj Lankin stayed in Pusan at that time and set up a clinic for Canadian personnel in that area, thus completing arrangements for provision of treatment for all Canadians in the Far East.

There remained now only the task of consolidating the Dental HQ and in early Oct 51 Lt-Col Shragge went to Pusan to supervise the convoying of the remaining dental vehicles to the Bde area. By 12 Oct 51 the convoy had arrived in Seoul and on 13 Oct 51 it came to its final destination at a field location with "hard dry standing" above the 38th parallel and about 300 yards from the Advanced Reinforcement Depot. The HQ dental clinic was set up at this location to provide treatment for personnel in the area and thus the 20 Cdn Fd Dent Det became a truly functional unit in the field, almost one year after Capt Nesbitt left Canada with the advance party.

PROBLEMS IN THE FIELD

During the latter part of Nov 51 the tempo of war increased and four of the DOs experienced shelling for the first time. Capt Sills, for example, had his laundry ripped to shreds on his improvised clothes line. The other problem

at this time was the onset of winter with frozen water trailers, anesthetic and other dental supplies as a result of the scarcity of kerosene stoves.

Christmas Day brought rain and thoughts of home and families but the dinner was excellent and the Korean house boys did their best to cheer up the group with decorations.

1952

REDESIGNATION OF UNIT

In Jan 52, 20 Field Dental Detachment officially became of age when it was redesignated 25 Field Dental Unit RCDC. During the same month the Unit was honoured by a visit from the Canadian Defence Minister, The Hon. Brooke Claxton, who inspected Unit HQ and spoke to all ranks.

The first of Mar 52 was also a memorable day for the Dental Unit as the date on which the DGDS, Brig Wansbrough, arrived in Seoul. He was met by Lt-Col Shragge and driven 50 miles by jeep to Unit HQ. During the next five days he visited all the Cdn Bde Units in the field and on his way back he paid a visit to Kure before boarding the train for Haneda Airport in Tokyo.



DGDS, Brig Wansbrough inspects 25 Fd Dent Unit

During the first week of May 52, Dent Unit HQ moved from its first location near the Advanced Reinforcement Coy to a new area next to the Indian Fd Amb at the entrance to the famous Gloucester Valley. This second and what turned out to be the final move of Dent HQ, came about mid-June and was to a rather flat area next to Rear Bde HQ. Those who were there at that time will recall a very efficient move since the convoy left the Gloucester Valley area at 1030 hrs., by 1300 hrs the cooks had a hot meal ready for everyone, and by 1700 hrs all tents had been erected.

CHANGE OF COMMAND

On 17 Jul 52 Lt-Col Shragge handed over command of the Unit to Maj GR Covey and then departed for Canada. At this time Sgt Shaw who had served an extra three months in Korea also returned to Canada.

In Jul and Aug 52, the DO from Kure went aboard HMCS "Nootka" and "Iroquois" to render treatment while they were in port. During the same period, most of the DOs in the field returned to new positions above the Imjim River when the Cdn Bde went back into the line. Three DOs were located at "A" echelons of the Bns.

Then the rains came and the Imjim rose 43 ft in a little over 24 hours. The rush of water carried away all bridges but one and it was so precarious that only one vehicle was permitted to cross at a time. This more or less isolated most of the DOs from Dental HQ for a while. To break up the debris floating down the river, the British tanks opened fire and some of the shells ricocheted off the water and landed in the Dental HQ area. One shell exploded about 30 ft from WO 2 Gareau's and the Sgts' Mess tent. This was a bit disconcerting to new arrivals from Canada who had come in to HQ that day and had their battle inoculation sooner than they expected. The incident was considered an "operational hazard" by Bde but in any event the CO, QM and Capt AG Andrews remained on duty until after midnight when the shooting ceased.

The year 1952 ended in Korea with some merriment and festivity, the greatest of which took place at the R 22e R "B" echelon with Capt Lavoie as the head waiter for the Christmas dinner and Pte Fortin as Santa Claus for the troops coming in from the front. The Canadian Concert Party from Vancouver was also in the Korean theatre to usher in the New Year with the troops.

1953

TREATMENT FOR RESIDENT CIVILIANS

Despite a high Cdn treatment load at the ADS, Capt AG Andrews continued to give emergency treatment to Korean civilians as well as all and sundry troops who came to the ADS for medical aid. One such case was a 73-year old blind Korean gentleman, who had been led by his five year old grandson and walked 15 miles to have a tooth extracted. This was an example of the co-operative and compassionate spirit of our dental officers in this theatre of war.

A divisional sweepstake on the Grand National was held on 26 Mar 53 and the first prize was won by the Dental HQ Tpt Sgt Cochrane who became \$1600.00 richer that day. Incidentally there were 16,000 tickets sold throughout the Commw Div and the Sgt had to sleep with all that money under his pillow until the Field Cashier had permission from AHQ to hold it for him.

Change of
Command. Major
Covey hands
over to A/CO
Major Smith



In Apr 53, Dental HQ became a little larger as a result of the break up of Rear Bde, the new lodgers being the Field Cashier, Historical Section, Postal Unit and Signal Detachment. These additions took place just prior to Maj Covey's handover of command to the new temporary CO, Maj AR Smith, on 27 Apr 53.

CHANGE OF COMMAND

Lt-Col BF Kearney arrived at Dental HQ on 25 May 53 to take command and all the DOs from the field units came to HQ to greet him. The actual turn-over parade, however, did not occur until 1 Jun 53. One of his first orders was a change in summer hours to commence work at 0600 hrs and have an afternoon stand-down to beat the heat. In addition, the HQ got a small "face lifting" in June with the completion of a new Men's Canteen, Officers' Mess and a flag raising ceremony which was attended by Brig Allard, several of his staff officers, Bill Boss the war correspondent and several Pay Corps types. Among the honours received during that period were the Dental HQ capturing first place in the Southern Conference Baseball League; and the track team from Dental HQ, Cpl Patterson and LCpl Palmer, which came second in the Bde sports meet - Palmer being the "all star" of the meet with five firsts in five events.

The first Interservice Dental Professional Meeting of the UN Forces was held in Seoul on 28-29 Nov 53. Five Cdn DOs attended and in all some 275 DOs from all Forces were present.

Early Dec 53 was spent completing the Dent HQ Officers' Mess for winterization and decoration for Christmas festivities. The Bde Commander and Miss Isobel Stewart of the Red Cross were dinner guests for this special occasion. A pine tree was found in the barren hills, brought to the unit lines and decorated with some 40 light bulbs dipped in various coloured paints. It was a most impressive sight on Christmas Eve.

Two days after Christmas, "Shorty" the Korean interpreter and batman for three previous Dental COs was married in Seoul. The Dental Unit was represented by Capt Evans and a number of ORs who reported the Korean ceremony was in many respects quite similar to the Canadian and just as effective.

1954

EVENTS OF INTEREST

On 31 Jan 54, the Korean New Year 4287 was celebrated and the CO presented every Korean attached to Dental HQ with a large bag full of "goodies" together with a pair of colourful hand-knitted Canadian wollen socks. This event received considerable publicity in the local press.

In early Feb 54 Maj Gen J Wren, DDS Army from UK, visited the Cdn Dental Unit HQ with his British Medical confreres and together with the Bde Comd, Brig Allard and all the DOs of 1 Comwel Div, celebrated a rather unique luncheon. Lt-Col Kearney presented the General with an RCDC scarf as a memento of his visit to the Canadians.

During the latter part of Feb 54, Col CB Climo, DDGDS arrived in Tokyo for his long delayed inspection of the Dental Unit. He was met there by the CO and despite the torrential rains his whole visit was a complete success. He was able to visit all the major and most of the smaller units in the Bde and before he left on 28 Feb even managed to win two large prizes at the Dental Unit HQ bingo game.

To soldiers in the field, a visit from the Canadian Prime Minister was quite an event and this took place on 8 and 9 Mar 54. Although time did not permit his visiting all units, Dental HQ personnel did attend the unveiling

ceremonies for the newly designated "Maple Leaf Park" - a memorial to all Canadians who had died in the Korean War.

CHANGE OF COMMAND

The culmination of the 1954 rotation took place on 12 May when Lt-Col Kearney handed over command of the Dental Unit to Lt-Col WM Sinclair. Among the many occasions of honour to the departing CO, two are particularly outstanding. First was the Mess Dinner at Bde HQ during which Brig Allard presented Col Kearney with a hand-carved wooden shield with the RCDC Crest on top and the Commonwealth and Korean patches on each side. Surmounted on the wooden shield was a small brass plate proclaiming that it was presented by 25 Cdn Inf Bde to 25 Cdn Field Dent Unit on the 38th Anniversary of the Corps. This shield is now displayed at The RCDC School. The other dinner given in Col Kearney's honour was held at Dent HQ on 14 May 54 and marked the official opening of the Officers' Mess - the first and only RCDC Mess. Fifty-seven guests were present including Unit Commanders, nurses, Red Cross workers, members of the US Army and the Hong Kong tailors.

Change of Command
Lt-Col Kearney hands
over to Lt-Col
Sinclair.



KOREAN SCHOOL

In addition to his regular dental administrative duties, Lt-Col Sinclair was appointed by the Bde Commander as Chairman of the Fund-Raising Committee to help rebuild the village of Chin-Mok-Chong - a village "adopted" by 25 CIB. The first appeal for funds was made by Lt-Col Sinclair over Radio Maple Leaf on 29 May and on 30 May the Canadian Variety Show playing for the troops at that time handed over \$166.00 of their collections to the Chairman. Within a month the Campaign Committee had collected over \$3400. and were ready to begin building the school. By the end of Aug 54 construction was underway and in September the Bde Commander also approved the erection of a Canadian Memorial Chapel. In addition other Korean villages were planned in the Cdn sector at Hwason Dong and Keohon to house the refugees before the onset of winter. The school at the first village was completed by 15 Oct 54 and was officially opened by the Bde Commander, Brig Clift. Lt-Col Sinclair had extended his tour in Korea by a month in order to help supervise the other schools being constructed in the Canadian sector. For this he received high commendation from the Deputy Commander of the American Forces in Korea.

During Jun-Jul 54, three DOs were taken ill, two of whom, Captains Sivell

and Joslin, were repatriated to Canada leaving three major units with sadly depleted dental services. However, Lt-Col Sinclair opened a new Dent HQ Clinic and appointed Capt DH Brotheroe as 2 i/c of the unit thereby narrowly averting a major crisis.

NO 1 COMWEL DIV RUNS DOWN TO BDE SIZE

Actual planning of the "run-down" of the Division began in late Aug 54 and was significant for the Dental Unit because the Dental HQ would have to be turned over to some other formation with the necessary moves involved. By late Oct 54, the run down had progressed to the point where 4 Cdn Guards and 2 RHCs were leaving, Dental Unit HQ had put their vehicles in first class shape for sale to the Japanese and the Dental QM Stores had closed and begun the packing and disposal of stores.

25 CPDU DISBANDED

One hundred progress reports after commencement of Cdn Dental Services in Korea, 25 CPDU was run down to nil strength on 27 Nov 54 and most of the personnel embarked for Canada. This was the end of a fine Unit, which, under the direction of four COs and a considerable number of DOs, ORs and personnel attached from other services, provided a comprehensive dental service to Canadians in the field and aboard ship that was second to none.

1955

DENTAL INCREMENT

The dental increment which remained behind, was composed entirely of volunteers under Capt Harrington and continued to provide treatment at 3 Cdn Fd Amb while Capt Skinner moved into his new clinic with the QORs at Maple Leaf Park. During Jan 55, Capt Harrington went to Kure to provide treatment for the 300 Canadians on a one-week-a-month basis and Capt Skinner made a similar trip in February.

25 Cdn Fd Dent Unit HQ
and Clinic with 3 Cdn
Fd Amb.



By the end of Mar 55, the QORs including Capt Skinner and about half the 3 Cdn Fd Amb had left for Canada. The Fd Amb was brought back up to strength by replacements from Canada who arrived early in May 55. This left a total strength of Cdn Forces in both Japan and Korea of under 400. By June the Dental Clinic in Kure was closed along with 2 CAU which left about 100 Canadians in Japan for treatment on periodic visits. It was during this period also that Maj Harrington assumed control of the remaining Comwel Div DOs, namely, two British and one Australian.

On 26 Aug 55, Maj JG Butler arrived in Korea and took over the Dental

Increment from Maj Harrington and the following month the Dental Clinic was moved from a van to a quonset hut where many Commwel Div tps received emergency treatment along with the Canadians. Incidentally, the greater part of the clinic local improvements were carried out by Sgt F Marchand and Cpl Patterson, the DT Lab and DA respectively.

1956-57

FINALE

On 5 Jul 56, Maj Butler and Sgt Marchand were replaced by Capt L Dombowsky and Sgt MD Crockett. This new increment continued the practice of alternating dental services on a weekly basis between the two remaining clinics.

The winter of 1956-57 was uneventful, but after all troops were out of Category 1, the detachment took a well deserved R & R in Hong Kong during Jan 57. By the end Apr 57, however, plans had been made for the withdrawal of the Cdn Med Det Korea and the RCDC personnel expected to leave by about 1 Jul 57. The two clinics therefore were closed on the 8th and 28th of Jun so that all remaining stores and equipment could be disposed of before departure.

With the return to Canada of Capt Dombowsky's Dental Detachment on 3 Jul 57, the mission of the RCDC to provide comprehensive dental treatment to Canadian troops during and following the Korean conflict was completed and a further seven years of distinguished service by the RCDC to the Canadian Forces had been accomplished.

ROLL OF RCDC PERSONNEL WHO SERVED IN THE FAR EAST

<u>1950</u>		Cpl	WA	Bennett	Pte	WE	Hill	
Capt	FM	Nesbitt	Cpl	JA	Fraser	Pte	LW	White
Sgt	DLG	Flesher	Cpl	JG	Finn	Pte	HJ	Gethings
Sgt	WB	Gilbert	Pte	GU	Cobb	Pte	GP	Costello
Pte	WCH	Sawyer	Pte	WJ	Arnsby	Pte	GW	Adams
			Pte	EMB	Everett	Pte	RH	Palmer
<u>1951</u>			Pte	EA	Jermain	Pte	JM	Tapp
Lt-Col	GE	Shragge	Pte	JR	Yeates	<u>1953</u>		
Maj	RE	Brown	Pte	JP	Carrier	Maj	BP	Kearney
Maj	HL	Lankin	Pte	TB	Cantley	Maj	AR	Ramsay
Maj	GC	Evans	<u>1952</u>			Maj	SG	Bagnall
Capt	WO	Mulligan	Maj	GR	Covey	Capt	KM	Thompson
Capt	LV	Crowley	Maj	ED	Fraser	Capt	RA	Gray
Capt	JMA	Donely	Maj	WW	Anglin	Capt	HE	McKenna
Capt	JR	Harms	Maj	AR	Smith	Capt	TD	Joslin
Capt	PS	Sills	Capt	HR	Kettyls	Capt	CJ	Sivell
Capt	JMR	Gourdeau	Capt	LR	Pierce	Capt	P	Veilleux
Lt	WJ	Thomson	Capt	JW	Fletcher	Lt	DH	Evans
WO 2	AE	Pritchard	Capt	WR	Thompson	WO 2	A	Van Ryssel
Sgt	RG	Stewart	Capt	AG	Andrews	SSgt	DW	Riddell
Sgt	EE	Davis	Capt	FB	Lavoie	Sgt	L	Lavictoire
Sgt	RG	Fortin	WO 2	AM	Gareau	Sgt	GW	Murphy
Sgt	VH	Shaw	Sgt	DR	Piche	Sgt	B	McLeod
Sgt	RC	Vickers	Sgt	AJ	Hughes	Sgt	BW	Holtham
Sgt	MB	Fisk	Sgt	RR	Claydon	Sgt	JR	Card
Sgt	CA	Chartier	Sgt	ESW	Moore	Sgt	MG	Dean
Sgt	RH	Daw	Sgt	A	Bourgeois	Sgt	FM	Kennedy
Sgt	M	Kostyniuk	Sgt	HC	Bilbey	Sgt	C	Johnston
Sgt	CS	Madge	Cpl	WFE	Hutton	Cpl	JG	Smart
Sgt	EB	Morse	Cpl	SL	MacLean	Cpl	JA	Roberts
Sgt	G	Shand	Cpl	WH	Fougere	Cpl	AF	Semple
Cpl	DA	Winslow	Cpl	SL	MacLean	Cpl	MM	Fediuk
Cpl	DD	Casson	Cpl	WH	Fougere	Cpl	DF	White
			Cpl	JAR	Shields	Pte	JE	Clarke
			Cpl	AR	Borsholt	Pte	WJ	Parker
						Pte	JR	Kennedy

<u>1954</u>						<u>1955</u>		
Lt-Col	WM	Sinclair	Sgt	GF	Keogh			
Capt	DH	Skinner	Sgt	CA	Young			
Capt	DH	Protheroe	Sgt	FH	Habart	Maj	JG	Butler
Capt	JD	Bourque	Sgt	T	Hussey	Sgt	JF	Marchand
Capt	AG	Taylor	Cpl	GM	Hemlow	Cpl	W	Olynyk
Capt	WH	Murray	Cpl	JRA	Deblois	Pte	JH	Fatterson
Capt	RL	Villard	Cpl	KR	Shappee			
Capt	WH	Harrington	Cpl	G	MacCuish			
Lt	IP	Hunter	Cpl	AJC	Gagnon			
WO 2	N	Curran	Cpl	BM	Roodman			
SSgt	VO	Bergland	Pte	G	Cote	Capt	L	Dombowsky
			Pte	RV	Lafrance	Sgt	MD	Crockett
			Pte	TJ	Matheson	Sgt	RK	Jones

1956

Colonel A.T. Roger Retires

Colonel AT Roger MBE, CD, DDS, commenced retirement leave 22 Aug 66 terminating service in the Dental Corps dating from 1939. During World War II he served in No 3 Coy CDC in UK, spent extended periods on staff at 1 Neurological Hospital Basingstoke, and 14 General Hospital. In Jan 45 he was awarded the MBE. After World War II he retired from the Army and re-enlisted in 1951. Since that time his appointments have included Chief Instructor at The RCDC School, CO of both 12 and 13 Dent Coy and CDO of the respective Commands. On 19 Aug 66 an informal reception was held at CFB Trenton to honour Col and Mrs Roger and appropriate presentations were made. Col Roger has accepted a position with the Faculty of Dentistry at Dalhousie University. All Corps members join in best wishes for a happy and successful future.



Col Roger being presented with a silver chafing-dish by Lt-Col NA Butcher with Brig Baird looking on.

PERIODONTAL SURGERY

Major J.J.N Wright CD, DDS



The winds of change are blowing across all fields of dentistry. Prevention is rightfully becoming the first step on the stairway to a complete dental service. Likewise, preservation of the supporting structures of the dentition is becoming the primary goal in an integrated treatment plan designed to enable patients to maintain an optimal dentition over an ever increasing life span. However, until the goals of prevention are fully realized, treatment of advanced pathological processes will remain an important aspect of routine procedures. New periodontal surgical techniques, based upon a sound understanding of the basic histologic and physiologic aspects of the involved tissues, enable the clinician to manage advanced periodontal problems with predictable results. No longer are the terms "gingivectomy" and "periodontal surgery" considered synonymous. Gingivectomy, although not obsolete¹, is but one of the techniques available in our surgical "kit bag" for periodontal surgical treatment.

HISTOLOGY AND ANATOMY OF THE ORAL MUCOSA

The mucosa overlying the alveolar process is composed of:

1. the marginal and interproximal gingiva;
2. the attached gingiva;
3. the alveolar mucosa.

Separating the firmly adherent attached gingiva from the freely movable alveolar mucosa is a definite line of demarkation, the mucogingival junction. Under the microscope, the epithelium of the attached gingiva shows a surface layer which is keratinized (or parakeratinized), whereas the alveolar mucosa is usually non-keratinized. The epithelium of the alveolar mucosa is thinner than the attached gingiva, thus placing the blood vessels of the lamina propria closer to the surface. These two factors collectively account for the redder appearance of the alveolar mucosa as compared to coral-pink of the attached gingiva. Physiologically the tougher attached gingiva has far greater ability to withstand the forces of mastication than the delicate alveolar mucosa.

OBJECTIVES OF PERIODONTAL SURGERY

The three main objectives of all periodontal surgical procedures are:

1. elimination of the periodontal pocket;
2. re-establishment of proper contour which will enable the patient to maintain the gingiva in a healthy state;
3. provision of an "adequate" zone of attached gingiva.

Friedman² states "A 'functionally adequate' amount of attached gingiva is not a matter of millimeters, but rather a sufficient amount to dissipate the pull of the musculature transmitted through the frenum or the alveolar mucosa that may retract the marginal gingiva or interproximal papilla."

It is mandatory that following periodontal surgery this "adequate" zone of attached gingiva be provided. In other words, the tissue surrounding the tooth must have³:

1. firm attachment to the tooth and alveolar bone;
2. dense, collagenous, supportive, connective tissue;
3. long slender connective tissue papillae; and
4. dense keratinized epithelial surfaces.

Obviously, alveolar mucosa with its loose texture and large amount of elastic tissue does not fulfill these requirements.

Keeping the histology of the area and the objectives of periodontal surgery in mind, it is easy to understand situations where the gingivectomy is doomed to failure. If the pocket depth (Fig 1) is such that a bevelled incision from the base of the pocket will eliminate all the keratinized mucosa then failure is inevitable.

MUCOGINGIVAL TECHNIQUES

There are a number of periodontal surgical procedures, collectively termed mucogingival techniques, which prove to be successful in situations where the "simple" gingivectomy will fail. In these techniques the pocket is eliminated, the bone is resculptured if necessary, and attached gingiva is provided around the treated teeth.

In the past fifteen years a number of mucogingival techniques have been proposed. Some of the more important contributions have been made by: Fox⁴ - the "Pushback", Schluger⁵ - "The Pouch Operation", Ochsenbier⁶ - "The Double Flap", Robinson⁷ - Periosteal Fenestration, Corn^{8,9} - Periosteal Separation and Edentulous Area Pedicle Grafts, Nabers¹⁰ - Repositioning the Attached Gingiva, and Grupe¹¹ - Lateral Sliding Flap.

As a diversity of techniques evolved in this field, terminology became a problem. Friedman¹² did much to clarify this situation with his classic article on mucogingival terminology. In this article he proposed the term "Apically Repositioned Flap" rather than "Repositioning of Attached Gingiva", and "Apically Displaced Flap" for "Pushback". Both of these terms have been generally accepted and are in current use.

APICALLY REPOSITIONED FLAP

Although no single technique can be considered a panacea, the Apically Repositioned Flap is one that is useful in a large percentage of cases. The technique was originally proposed by Nabers¹³ and later modified by Ariaudo and Tyrell¹⁴.

It is now generally agreed that it is better therapy to resort to surgery in cases with deep periodontal pockets than to attempt to carry a patient along with oft-repeated subgingival scaling and curettage. Surgery is no longer looked upon as a radical procedure.

Prichard¹⁵ lists the following indications for mucogingival surgery:

- "1. To eliminate pockets extending apically beyond the mucogingival junction.
2. To relieve tension on marginal gingiva from frenulum and muscle

attachment and the elastic fibers in the alveolar mucosa.

3. To eliminate pockets and increase the width of attached gingiva where it is indicated.
4. To eliminate pockets and increase the width of attached gingiva where it is inadequate.
5. To extend the vestibule where necessary to provide for an adequate zone of attached gingiva.
6. To move attached gingiva apically keeping it consistent with the marginal bone after osseous resculpturing to correct marginal inconsistencies and furcal invasions."

The apically repositioned flap enables the clinician to treat the conditions listed.

TECHNIQUE FOR APICALLY REPOSITIONED FLAP

1. The area to be surgerized is prescaled¹⁶ about one week prior to surgery for the following reasons:
 - a. to improve tissue tone by reducing the inflammation in the area;
 - b. to minimize the time required at surgery for removal of local accretions.
2. The initial surgical step is to make a horizontal (gingivectomy style) marginal incision, provided adequate attached gingiva is present. Frequently however, it is necessary to conserve as much attached gingiva as possible by using a reverse bevel incision¹⁷ (Fig 1). It is made with a Bard-Parker No 12 blade (or some other suitable instrument) running obliquely from the marginal gingiva downward and inward to the alveolar crest. This incision removes the pathologic crevicular epithelium and, where necessary, thins the flap. It may be straight or scalloped (Fig 4) in its horizontal aspect.

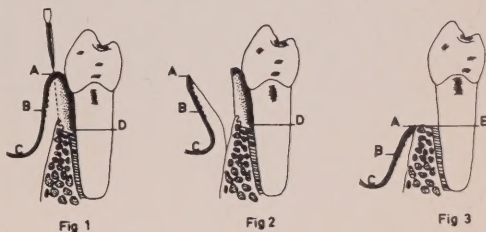
A-B - Attached gingiva

B-C - Alveolar mucosa

B - Mucogingival junction

D - Base of periodontal pocket

E - Recontoured marginal bone



3. A flap is raised (Fig 2 and 5). If the flap is short, it is necessary to make mesial and distal vertical incisions. These incisions should begin in the area of an interproximal papilla and be through periosteum to the alveolar process. They also must extend well into the alveolar mucosa.



Fig 4



Fig 5



Fig 6



Fig 7

4. The interproximal tissue and that coronal to the initial incision is curetted out (Fig 6).
5. If recontouring of the bone is required it is done with a number eight round bur using adequate coolant. The desired end result is to recreate an acceptable bony architecture (Figs 7 and 15-21).
6. The full thickness flap is then repositioned apically so that the margin of the flap approximates the buccal or lingual alveolar crest (Fig 3). If inadequate attached gingiva is present, the amount can be increased by repositioning the flap further apically thus leaving an area of denuded bone coronal to the flap. This area will "granulate in" and form new attached gingiva which will subsequently merge with the repositioned flap.
7. Suturing - When the flap is repositioned it is usually sutured to stabilize it during pack application. Horizontal sutures to adjacent tissue (Fig 12) may be made at the vertical incisions and/or "sling" type sutures placed interproximally to prevent the flap from being displaced apically. When using the Sling Suture as proposed by Gottsegen ^{RB}8, the procedure is as follows:

- a. The suture is passed interproximally from the lingual through the distal embrasure (Fig 8) and the flap pierced from the periosteal side opposite the distal interproximal area.

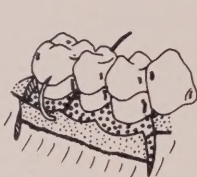


Fig 8



Fig 9

- b. The suture is then returned through the same interproximal space (Fig 9) and directed mesially around the lingual aspect of the same tooth.



Fig 10

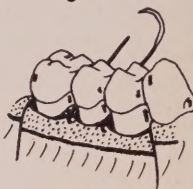


Fig 11

- c. The suture is then directed through the mesial interproximal space (Fig 10) and the flap is once again pierced from the periosteal side opposite the mesial interproximal space.



Fig 12

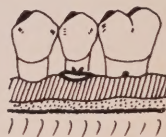


Fig 13

- d. Finally, the suture is looped back over the flap margin, returned through the mesial interproximal space (Fig 11) and a knot tied on the lingual (Fig 12-13). Although Gottsegen advocated piercing the flap from the periosteal side, it is often easier to pierce the flap from the surface side with an equally good result. It is usually advantageous to have the dental assistant stabilize the flap in the desired position while the knot is being tied. This is the critical part of the procedure, in that the proper length of

"sling" which controls the apical displacement of the flap is mandatory if optimal post-operative results are to be attained.

8. A periodontal pack is placed, taking care that no pack finds its way under the flap. The pack ensures the flap will not slip coronally to the position predetermined by the "slings".
9. Pack and suture removal is usually carried out seven days post-operatively and a new pack inserted. The number of pack changes required will vary with the situation and the individual.

ADVANTAGES OF APICAL REPOSITIONED FLAP TECHNIQUE

The advantages of this over other mucogingival techniques include the following:

1. the flap aids in healing;
2. the flap protects the area;
3. the size of the surgical wound is minimal;
4. less pain is encountered than with denudation techniques;
5. post-operative bleeding and over-granulation is minimized;
6. permanent resorption of the alveolar bone is minimized.

In addition, as in other flap procedures, osseous recontouring and management of intrabony defects is facilitated.

BONE DENUATION

Histologic and clinical investigations have shown that when alveolar bone is left denuded, such as is done in the apically displaced flap, attached gingiva forms over the denuded area^{19,20,21}. Granulation tissue, the precursor of future attached gingiva is derived from the cells of the periodontal ligament^{22,23} and the bone marrow²⁴. Although the end result of denudation techniques is quite predictable as to the permanency of the width of attached gingiva and created sulcular depth²⁵, two main disadvantages are encountered:

1. a stormy post-operative course;
2. significant marginal bone resorption.

These drawbacks limit the usefulness of denudation techniques when large areas are involved.

OSSEOUS SURGERY

Present concepts in periodontal osseous surgery are based on a classic article written on the subject by Schluger²⁶ and later elaborated on by Ochsenbein²⁷. In a healthy periodontium the gingiva follows closely and is consistent with the surface topography of the underlying bone. When the bone has been affected by periodontal disease and irregular bone contour has resulted, the surface of the gingiva does not follow these irregularities but maintains a more even contour with resultant pocket formation. Furthermore, if the gingiva is surgically contoured to follow irregular bony patterns, it will not remain in this form but will revert to a smooth scalloped form, thus recreating the pockets. It is only when the bone has been resculptured to a "normal" architecture, or when the rise and fall of contour is gradual, that the gingiva

will follow this form and maintain it. Irregular defects such as intrabony pockets, sharp or wide ledges and irregular margins must be recontoured. THUS IF PERIODONTAL SURGERY IS TO BE ULTIMATELY SUCCESSFUL WHERE BONY IRREGULARITIES EXIST, OSSEOUS SURGERY IS NECESSARY.

Friedman²⁸ defined two terms for osseous procedures:

1. Osteoplasty refers to the resculpturing of bone without removal of the alveolar bone proper (i.e. the cortical bone which lines the socket).
2. Ostectomy refers to procedures in which the alveolar bone proper is removed.

Where possible, bone is resculptured so that the topography resembles that which is referred to as "normal", i.e. the surface contour is the same but due to the periodontal involvement is usually shifted apically.

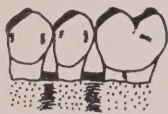


Fig 14



Fig 15

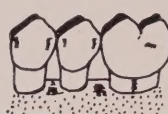


Fig 16

When interproximal craters exist (Fig 14) ramping of the bone results in the interproximal bone being apical to the adjacent marginal bone (Fig 15). Whenever interproximal bone is apical to adjacent marginal bone, be it due to ramping of craters or resorption from periodontal disease processes, it is necessary by ostectomy to lower the marginal bone (Fig 15 - to dotted line) so that surface contour which mimics the normal will be re-established (Fig 16). Only in this way will the reformed gingiva be able to follow the osseous contour, thus preventing recurrence of pockets in the area.

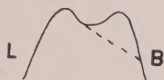


Fig 17



Fig 18



Fig 19



Fig 20

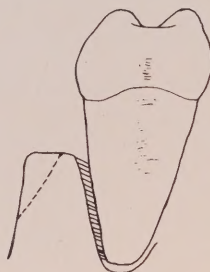


Fig 21

There are several approaches to the management of the interproximal crater. Either the buccal or lingual lip is removed, thus "ramping" the bone either to the buccal or lingual. In the mandible the bone is usually ramped to the buccal if the "lips" are equal (Fig 17) since access is better in this direction. When the lips are unequal in height, the more apical one is ramped since this minimizes bone removal (Fig 18-19). In the maxilla the bone is

usually ramped towards the palate³⁰ (Fig 20) regardless of which lip is more apical. If ramping is done to the buccal in the molar area, reduction of marginal bone will likely be necessitated and the trifurcation area may thus be involved. In the maxillary anterior region, esthetics necessitates a palatal approach.

When bony ledges exist (Fig 21) it is necessary by osteoplasty to thin the marginal bone thus recreating the normal knife-like edge contour in the marginal area.

There are many types of osseous deformities other than the interproximal crater (e.g. 1, 2 and 3 wall intrabony pockets). Management^{30,31} of these lesions is beyond the scope of this paper. However, in the surgical correction of any type of bone defect, three basic principles should be followed:

1. There must be sufficient supporting bone present, prior to surgery, to allow for adequate support of the involved teeth post-operatively.
2. Normal physiologic contour should be recreated as closely as possible, with minimal bone removal.
3. If normal anatomy cannot be attained a gradual rise and fall of surface contour should be developed.

SUMMARY

The histology and anatomy of the normal oral mucosa which surrounds the teeth has been reviewed. Surgical approaches to periodontal pocket elimination have been discussed in general. A valuable mucogingival technique, the "Apically Repositioned Flap", and some principles of osseous surgery have been discussed in detail.

Acknowledgement: The author is indebted to Major DH Newell, USA, DC for providing the illustrations included in this article.

Editor's note: There are 31 references. Bibliography supplied on request.

US Army Exchange Dental Officer Posted

During the past two years the RCDC School have been fortunate in having on staff a very competent American exchange dental officer. Maj Don Newell of the US Army DC has served at the School in a teaching capacity both within his specialty of Periodontics and in Basic Sciences. He received his undergraduate training at the University of Illinois and also received a Qualification in Periodontics and a Master of Science in Oral Histology from the same University. Major Newell's tour of duty at the RCDC School terminates in Oct 66 and is followed by an assignment as Periodontist on the staff of Madigan General Hospital, Tacoma, Washington. His excellent service has been appreciated by the Corps and best wishes are extended to Major Newell and his family for the future.



DENTAL PUBLIC HEALTH PROGRAM 1965-66
NO 15 DENTAL COY RCDC(R)

Major H.P. Guevremont, CD, BA, DDS, DDPH



During 1965-66 a long-range Dental Public Health Program was organized in 15 Dental Coy. This report enumerates the principles applied in formulating the program, outlines objectives and methods used in its implementation, and presents recommendations for future planning.

Definition - Dental Public Health is a branch of Preventive Dentistry and is defined as "prevention organized through community effort".

Aim - The aim of the program is to assist in fully realizing a state of health as defined in the Constitution of the World Health Organization; namely, "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity".

Principles - Three principles form the basis for this program.

1. Patient Education - This is the keynote for the entire program. People cannot be legislated into good health. Only an informed and interested individual or community can take advantage of the ever-increasing knowledge of ways to achieve positive health.
2. Participation - The low degree of participation of lower class persons is a constant frustration. They are constantly referred to as the "hard to reach group". Hard to reach in all likelihood must be regarded as a conclusion largely based on "don't know how to reach", much less than on "they are not receptive". (Polgar, S)
3. Planning - The purpose of planning is "to rationalize the activities on which planning is imposed; to make subject to calculation what was previously left to chance; to organize what was previously unorganized; to replace spontaneous adjustment with deliberate control". (Eckstein, H)

Program Objectives

1. Patient Education

* Note - The shortage of dental public health personnel restricted this phase of the program to new entries and DND school children.

a. Servicemen

- (1) Recruits were given group lectures on oral hygiene during their first week in the Service. The objective was to indoctrinate and motivate them with correct perceptions regarding dentists and dental health. This portion of the program included 50 lectures to large groups.
- (2) After being informed and motivated, the individual approach was used to induce the decision to act. Personal contact with small groups (five-ten) is the best known method. For many of the recruits, this was their first contact with the dental profession.

The lectures were based on established and proven techniques of individual chairside instruction and given by a Technical Dental Therapist and Dental Technician Clinical. It was found that familiarization with the clinic environment and relaxed participation in discussions of oral hygiene and home care measures stimulated positive interest. 197 lectures were given to small groups.

- (3) Individual chairside instruction was given to each patient by the Dental Technician Clinical.

b. In-service Training

All auxiliary dental personnel should be indoctrinated with a sense of responsibility for participation in a dental public health program and should be trained so that they are capable of fulfilling that responsibility. Dental assistants at CFB St Jean undergoing in-job training were given lectures and demonstrations in oral hygiene by the Dental Technician Clinical.

c. Public Relations

The World Health Organization states that, "Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people".

- (1) Commanding Officers should be informed regarding the needs of their troops and the RCDC dental health objective.

- (2) Dental Health Week

Each year, during the week devoted to Dental Health, every medium of communication available has been used on bases and stations. Some of the programs carried out during Dental Health Week are listed hereunder:

CFB Goose Bay

- examination of, and lectures to 638 school children
- DPH films shown at school and over the local TV station
- posters placed in every section
- articles in the RCAF newspaper
- radio and TV spot announcements made daily during the week
- a controlled panel discussion on TV
- all clinic personnel took part in the program.

CFB St Jean

Due to the weekly intake of recruits, every week is a Dental Health Week.

RCAF Mont Apica

Lectures were given and discussions held with the Parent-Teachers Association.

CFB Valcartier

Examination of, and lectures to 1187 children
Distribution of Crest kits to grade III DND pupils

- (3) Pamphlets were distributed on the use of fluoride as a dietary supplement in non-fluoridated areas.

Future Planning

1. Priority of dental treatment for recruits:
 - a. Recruits at CFB St Jean and CFB Valcartier will be in Cat II on completion of training;
 - b. Apprentice soldiers at Longue Pointe will be in Cat III after two years training;
 - c. Officer cadets at CMR St Jean will be in Cat III before graduation.
2. Radar stations:
 - a. Dental Technicians Clinical will lecture to parents, teachers and school children during temporary duty trips.
3. DND Grade III children will be on the Crest Program once a year. This includes free toothbrushes and toothpaste supplied by Procter and Gamble.
4. OICs Clinics will report annually to base commanders regarding the state of dental health, probably during Dental Health Week.

Summary

A co-ordinated long-range Dental Public Health program has been initiated in No 15 Dental Coy. It is based on the principles expounded by various authorities on public health including the World Health Organization. The keynote for the program is "patient education" and this is mainly directed towards the recruit. Results to date have been encouraging.

.....

Cet article du major P.H. Guevremont porte sur le Programme d'hygiène dentaire public dans 15 compagnies dentaires. Il énumère les principes sur lesquels se fonde ce programme, il en étudie les buts ainsi que les moyens utilisés pour les atteindre, et il expose les projets d'avenir. L'idée dominante du programme est l'éducation patiente et persévérante, surtout dans le cas des nouvelles recrues et des enfants des écoles du ministère de la Défense nationale. Le major Guevremont met l'accent sur l'action personnelle, la formation au sein des forces armées et les Relations extérieures, qui doivent utiliser pleinement tous les moyens de communication. Il s'agit d'un programme coordonné et de longue haleine, dont les résultats sont déjà encourageants.

.....

During a dental health campaign in Gloucestershire a novel idea to impress the public was used. A display card was produced - depicting the four tons of teeth annually extracted from the mouths of British children being carried away on a huge four-ton lorry.

- British Dental Journal - 3 May 1966

Naturally the main benefit of fluorides is in the area of caries prevention, but there is also sufficient evidence to prove that an ideal concentration of dietary fluorides may also strengthen bones and prevent some bone-wasting diseases that accompany old age.

- Editorial - Dental Digest - August 1966

The RCDC News

Fourth Annual RCDC Golf Tournament

The RCDC School once again played host to Corps members for the annual RCDC Golf Tournament held at CFB Borden 23-24 September.

Seventy-nine golfers from as Far West as Edmonton and as far East as Montreal assembled for this event and teams representing six RCDC units competed for the RCDC Officers' Trophy for team play. This award was won by the team from the RCDC School.

Lt-Col WH Carter receiving
The KM Baird Trophy from
Brig Baird.



Sgt Bill Hill receiving
The GR Covey Trophy from
Col Covey.



RCDC Officers' Trophy being
presented by Col BP Kearney
to members of the RCDC School
team - L to R - WO 1 Tom
Batten, Sgt Dick Walker and
Maj Jim Wright.



The KM Baird Trophy was awarded to Lt-Col WH Carter from CFB St Jean with a low gross score of 170 over 36 holes.

The GR Covey Trophy for low gross for 18 holes Medal Play was won by Sgt Hill WE with a score of 84.

Prizes and novelties were awarded to twenty-one other participants, ranging from the Tournament Low Net to Lt-Col GE Windsor with a score of 146, to the renomination of Major DJ MacPhee as the Most Honest Golfer with an undisputed gross score of 326. (Don never makes excuses, but undoubtedly the wet and windy conditions during the first morning of the tournament added at least two or three strokes to his score.)

A number of "drop-ins" joined the golfers on the final evening to swell their numbers to 100 attending the banquet and presentation of awards held at the RCDC Sergeants' Mess.

Directorate

Duty Trips and Visits

Brig KM Baird and Col BF Kearney visited the RCDC School 9-10 Aug. DGDS was the reviewing officer for the cadets' graduation parade at which awards were presented to the honour cadets. DDGDS interviewed all Third Phase candidates.

Col BF Kearney and Col LG Craigie inspected No 1 Dent Eqpt Dep Petawawa, on 26-27 July.

Col BF Kearney attended the Senior Officers' Management Symposium held at CFB St Hubert, P.Q., from 7-16 September.

Postings to Directorate

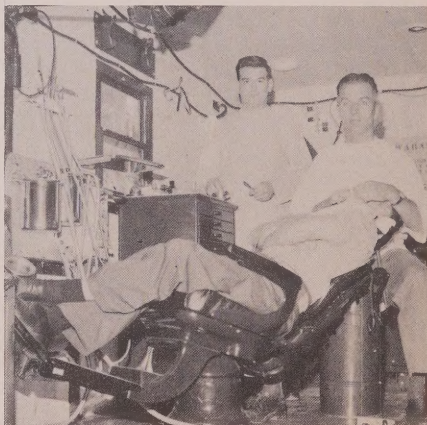
During the summer the following members of the Corps were posted into the Division:

Lt-Col JW Turner, assistant to the Senior Consultant;
Lt-Col LR Pierce, staffing and requirements;
Maj JVP Chatwin, D.F.H.O.; and
SSgt Sullivan TW, Procurement Section.

11 Dent Coy

Equipment

Maj MP Quinn and his DA Cpl Wesley JA working in mobile dental van at Camp Vernon. The Encore Mobile Field Dental Unit may be seen attached to the wall of the van.



Conferences

A one-day conference on Militia matters was held 8 Sep 66 at HQ No 11 Coy RCDC. Lt-Cols Geldart, Snidal, Rondeau and Mintz attended.

Retirements

Capt Ian Hunter

A Unit party was held on 14 Sep 66 to say "farewell" to Capt Ian Hunter who commenced retirement leave on 16 Sep after 25 years service with the Corps. Capt Hunter has decided to venture into the hotel business and is wished the best of luck by his friends in the Corps.

Sgt MacKay GF

All ranks of No 8 Clinic attended a gathering in the FOs' Mess, CFB Esquimalt, to say good-bye to Sgt Gordie MacKay who proceeded on retirement leave 30 Sep 66 after 26 years of service in the Corps.

Commissioned from the Ranks

Congratulations are extended to Lt JR Savoie on being commissioned and promoted to the rank of Lieutenant (Specialist Officer) effective 16 Sep 66. He has served as a storeman clerk, enrolling in the CA(R) in 1950.



12 Dent Coy

Duty Trips

Capt FGC Arpin and Pte Beauchamp CJN returned from a 17-day cruise aboard HMCS Cape Scott and visit to Bermuda. Hardships!

Sports

A Garrison Golf Tournament was held on 19 Sep at the Brightwood Golf Course, Dartmouth. Out of ten RCDC competitors, seven won trophies or prizes. The winners of trophies included Capt JF Mullins, SSgt McFarlane AJA and Cpl Davies DJ. Prize winners included Capt EF Foley, Capt HS Wood, Capt GS Zwicker and Sgt Flesher DLG.

13 Dent Coy

Retirements

WO 2 McLeod BA

WO 2 "Mac" McLeod is severing ties with the Armed Forces dating from NPAM Service 1938 and Active Service 1941. Since 1946 he has been a member of the RCDC. A gathering was held at CFB Trenton to honour him with a suitable memento from 13 Dent Coy HQ and dental clinic staff in the Trenton area. WO 2 McLeod and his family will take up residence in London, Ontario.

WO 2 Stokes HJ

WO 2 "Jim" Stokes enlisted in 1939 and all of his service of almost 27 years has been in the Dental Corps. WO 2 Stokes is seen receiving an engraved silver tray presented by Lt-Col JM Smith on behalf of members of 13 Dent Coy. He will remain in London, Ontario on completion of his rehabilitation leave.



14 Dent Coy

Conferences

Lt-Col Anglin attended a meeting of the Medical and Dental Services Committee for the Pan American Games to be held in Winnipeg 22 Jul-7 Aug 67.

Personnel

Maj LA Reynolds was welcomed to Winnipeg on reporting for duty as the Dental Staff Officer Training Command Headquarters.

2nd Lt Bowness has assumed his duties as Quartermaster 14 Coy.

Dental Public Health

Lectures and films were organized at the Farnham Cadet Camp and were presented by WO2 Fortin and Sgt DeBlois. The senior officers of the Camp were most eager to co-operate in this programme and even cancelled military lectures to accommodate DPH talks and discussions.

Val D'Or Clinic

A one and a half room clinic - a Bachelor - was made operational at RCAF Val d'Or. This is probably the smallest but best equipped clinic north of the 48th parallel.

Sports

CFB Montreal conducted a golf tournament on 27 Sep 66 in which Lt Jackson placed 2nd in "B" flight.

Special Events

Perhaps all births should be recorded under "special events", but because of lack of space in the Quarterly this is not the practice. However, when notification was received that WO2 Roger Fortin named his new son "Maurice Richard", special mention seemed warranted. Obviously "The Rocket" still has loyal fans after several years of retirement.

Retirements

Major Jacques Durand, a University of Montreal graduate, has commenced retirement leave having had continuous service with the Corps since 1942. He has served with various dental units in Canada and with 27 Field Dental Unit, Germany. Jacques' outgoing personality has made him a well known member of the Corps and his many friends wish him success in his new career with the Dental Department of the City of Montreal.

Major Lucien Masse is retiring from the RCDC after 12 years of service. He graduated from the University of Montreal in 1945 and served for two years in the Corps at that time, re-enlisting in 1956. Upon retirement he plans to accept a position with the Department of Health and Welfare in the Province of Quebec.

1 Dent Det

Sports

Maj EW Gazo for the second year in succession became Club Champion of Fine View Golf and Country Club, Ottawa. Congratulations Ed!

4 Fd Dent Coy

Sports

Lt-Col Richardson and Major Begin started off the curling season by participating in a German-sponsored international bonspiel in Cologne, Germany, 9-11 Sep 66.

In the patient's mind -

Explanations prior to treatment are education; those after treatment are excuses.

- Journal of Prosthetic Dentistry - July-August 1966

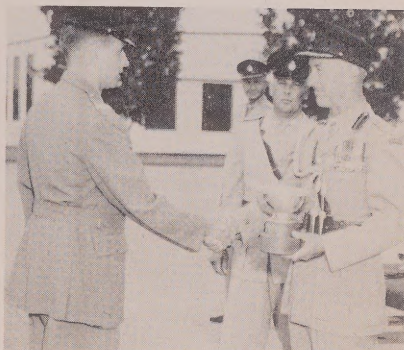
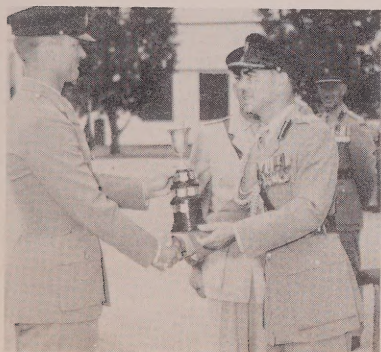
RCDC School

Dental Officer Subsidization Plan - 1966

As in previous years Fractical Phase DOSP Training was conducted at CFB Borden during the summer months.



DOSP Cadets' Graduation Parade 1966



- Upper left - 2 Lt HA Fankratz receives Third Phase Honour Cadet Trophy from Brig Baird.
Upper right - O/Cdt EL MacInnes receives Second Phase Honour Cadet Trophy from Col Kearney.
Lower left - 2 Lt ED Cragg receives Chief Instructors' Trophy from Lt-Col Frotheroe.
Lower right - O/Cdt Steel receives First Phase Honour Cadet Trophy from Col Covey.

2 Lt HA Fankratz of University of Manitoba was named Honour Cadet, Third Practical Phase, and 2 Lt TJ Erskine of University of Alberta was Runner-up.

2 Lt ED Cragg of University of Alberta was awarded the Chief Instructors' Trophy for clinical efficiency.

O/Cdt EL MacInnes of University of Toronto was named Honour Cadet, Second Practical Phase, and O/Cdt PE Arnold of University of Alberta was Runner-up.

O/Cdt JC Steel of University of Alberta was named Honour Cadet, First Practical Phase.

The DGDS and DDGDS visited the RCDC School from 8-11 Aug during which time Third Phase DOSF officers were interviewed. A Graduation Parade was held on 11 Aug followed in the evening by a Training Mess Dinner for all DOSF officers at the CFM and DS Officers' Mess.

Successfully Completed Officer Candidate Programme



Colonel GR Covey, Commandant of The RCDC School congratulates O/Cdt RW Bowness on completion of Third Phase OCF training and promotion to 2 Lt.

2 Lt Bowness enrolled in the Canadian Army as a Private on 22 Feb 62 and was allocated to 2 Bn PPCLI. He served as a clerk with the Battalion in Edmonton until his transfer to the RCDC on 24 Sep 64. He was promoted to Corporal in July 1965. 2 Lt Bowness was accepted into the Officer Candidate Programme while serving with the RCDC and through diligent training and perseverance achieved his present rank. 2 Lt Bowness and his wife will reside in Winnipeg where he will assume duties with HQ No 14 Dental Coy RCDC.

Inspections and Visits

On 5 Aug, AVM R Stovel, newly appointed Commander of Training Command, visited Base Borden and made a short inspection of the RCDC School. During his visit as reviewing officer of the RCASC(S) Graduation Parade, he presented the Platoon Commander - DOSF First Phase Honour Cadet JC Steel, with a special award.

Sports

Tuffy Tieman Trophy - a golf team from The RCDC School again captured the Tuffy Tieman Trophy in the annual tournament held at Base Borden for all RCDC and CFMS personnel serving in Ontario. The members of the School team were Lt-Col DH Protheroe, Maj JN Wright, WO 1 TL Batten and Sgt RS Walker.

Capt CH Loken Retires

Capt CH Loken has retired from the Forces after more than 26 years service. Charlie was well known in the Corps, not only because he served a full generation

of dental officers as a lab technician, but also because he spent extended periods of time on staff at The RCDC School. He was commissioned in 1965 and completed his service as Lab Officer at the School. His Corps associates wish him well in his new career on staff at University of Toronto Dental Faculty.

1 Dent Eqpt Dep

Training

With the advent of changes in trade structure, two courses are being conducted at the Depot of particular note. The Dental Equipment Maintenance Assistant Gp 2 Course now being conducted introduces the new training for Dental Equipment Technicians and Dental Storemen. The Dent Stmn Gp 3 Course now in progress is the last course of this nature to be held.



Dental Storeman Group 3 Course - L to R - Cpl Nadeau LJP, Cpl McKay DH, Cpl McKinnon HJ; Pte Lubitz HE; WO 2 Fonton AG (Instructor).

CBU (UNEF)

Visits and Inspections

Mr John Starnes, Canada's Ambassador to the United Arab Republic, paid a visit to this detachment and inspected dental facilities.

Special Events

Dominion Day celebrations were held at the Rafah Beach during the morning of 1 July. LSgt Lindsay of this detachment won the swimming event for HQ Coy and Maj Bisaillon participated in the Pte to Maj Race. The highlight of the festivities was the camel race.

Cpl Hall was a member of the guard of honour on 2 Jul for Dr Ralph Dunche, UN Undersecretary for special Political Affairs.

Sports

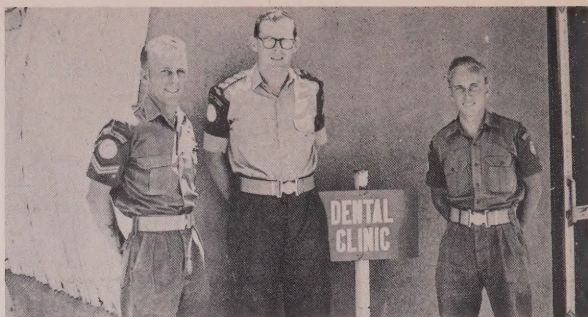
Maj Bisaillon became president of the Bedouin Golf Club vice Capt Chernesky.

Labour Day was celebrated with a golf tournament during the afternoon. Cpl Hall won a prize for "high hidden hole" and Cpl Harmer won his prize for being the "most honest golfer".

Rotation

During rotation Capt Nye, Cpl Pink and Cpl O'Dell welcomed Capt Strom, Cpl Black and Cpl Albertson.

RCDC Detachment -
outside the clinic -
Cyprus - L to R -
Cpl Pink, Capt Nye and
Cpl O'Dell

**Training**

RCDC School - Canadian Forces Base Borden - Capt to Major Qualifying - 12 Sep-21 Oct 66

Cpts JPA Legendre, JL Girard, GW Hill, PR McQueen, CM Mason, DR O'Hara

RCAC School - Canadian Forces Base Borden - Jr NCO Course - 7 Sep-26 Oct 66

Cpls Strasdin JA, Ritchie JR, Delmage RK, Bosch F, Kukurudziak TRJ; Ptes Evans RV, Estabrooks AL, Kilgrain BC, Feeney DC, Scheer RV

No 1 Dent Bqpt Dep - Canadian Forces Base Petawawa - Dental Storeman Gp 3 - 12 Sep-7 Oct 66

Cpls McKinnon HJ, McKay DH, Nadeau LJP; Pte Lubitz AG

University of Michigan - Ann Arbor, Michigan, USA

Major AT Hinch - Complete dentures - 19-30 Sep 66

US Naval Dental School - Bethesda, Maryland, USA

Major HG Binston - Removable Partial Dentures - 26-30 Sep 66

Major JFA Marcil - Oral Pathology - 24-28 Oct 66

Walter Reed Army Institute of Dental Research, Washington, USA

Major JJY Turcotte - 18 Aug 66 - 6 Oct 67

University of Toronto

Major SW Muller - Dental Public Health - Sep 66 - June 67

Training with Industry - SS White - Staten Island, NY, USA - 19-23 Sep 66

WO 1 Carpenter EC; WO 2 Stewart RG; SSgt Hopkins RG

Training with Industry - Ritter Training School - Rochester, USA - 19-30 Sep 66

WO 2 Hutchinson JW

Welcome to the Corps

Acordial welcome is extended to the following personnel who have recently joined the Corps:

Mrs PJJ Rutherford, Miss JC Minicola, Ptes Gallagher GJ, Brophy GL, McKenzie JN, Haiplik RM, Faquet Y, Thomson JE, Hewitt DG, Arbour JMM, Wilson AM, Likins JA.

Promotions

To Lt-Col - AG Andrews
To Major - RJ Paturel, CAC Casterton, HW Brogan
To Lt - JR Savoie
To 2Lt - RW Bowness
To WO 1 - Ponton AG
To SSgt - Jerome AMC, Yeates JR, Lunnin SH, McFadden EE
To Sgt - Hussey AW, McRoberts DT
To Cpl - Gapmann HKK, Hope WJ, Tallack RJ, Maelde P, Walker JM, Anderson CM,
McIntosh WR, Timmers PAG

Retirements and Releases

Col AT Roger, MBE, CD
Majors ED Fraser, WA Sugars, J Durand, JLM Masse
Capts GR Rowe, JJ Anderson, IP Hunter
WO 2 Stokes HJ, McLeod BA
Sgts Grundy FG, MacKay GF
Cpls Forward RJ, Hogan JAP, Hagglund FN, Pouliot JR, Morrisette B, Longford MD
LAW Hardy MRJM
DA Ft V Mrs AM Debicki, Mrs L Ruigrok

Vital Statistics

Marriages

Major LA Reynolds to Miss Ursula Augusta Lissette Brenscheidt; Capt ICM Wamera to Miss Judith Ann Banks; Capt NA McFarlane to Miss Norma Lake; Cpl Sabine-Pasley CSTC to Miss Agnes Philomena Fleming; Pte Mehler PJ to Miss Glennis Faye Shore.

Births

Son - Cpl & Mrs RD Veinot; Pte & Mrs TH Taylor; Cpl & Mrs LH Pion; Sgt & Mrs RB Johnson; WO 2 & Mrs RG Fortin.

Daughter - Capt & Mrs JHD Charron; WO 2 & Mrs VO Blackmore; Cpl & Mrs PJ Dumas.

Deaths

Our sympathy is extended to Cpl & Mrs NL Highfield upon the death of their son on 6 Jul 1966 and to SSgt and Mrs Dion on the sudden loss of their daughter 31 Aug 66.

RCDC(M) General Efficiency Competition Results

The Moore Trophy - Major Militia unit with most efficient dental element
- 1st Toronto Service Battalion - Major WC Waid - dental officer

The Trelford Trophy - Runner-up
- 20 Field Regiment RCH(M) - Capt CH Gulleckson - dental officer

The Saskatchewan Dental Association Memorial Trophy to the area with highest RCDC(M) training attendance

- Western Ontario District
- Lt-Col J MacLean - Senior Supplementary Reserve Dental Officer

The
**ROYAL CANADIAN
DENTAL CORPS**
Quarterly



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Cover Photograph

Radar site in winter
Canadian Forces Station Foymount

NO 13 DENTAL COMPANY
ROYAL CANADIAN DENTAL CORPS

Colonel A.T. Roger, MBE, CD, DDS, (Retd)



Background

The history of this unit dates from 1 Oct 46, the day on which the 'post-war' reorganization of the Canadian Army became effective. The unit was formed from personnel of Nos 22 and 36 Companies, which were based in Toronto and Trenton, respectively. No 13 Dent Coy thus became one of the three original Active Force Dental Units, and was designated the "RCAF Company", in recognition of the tri-service function of the Corps. Its Headquarters was located at Central Air Command HQ, RCAF Station Trenton, but its area of responsibility coincided with the geographical boundaries of the Army's Central Command.

From time to time certain changes have taken place in the regional limits of this unit's jurisdiction. When The RCDC School was moved from Ottawa to Camp Borden, a 'treatment wing' was established in the School, and the clinic which had been staffed by No 13 Dent Coy personnel was subsequently closed. At this time control of the dental clinic serving the RCAF in Camp Borden was also transferred to The School.

Another major change in this unit's establishment took place on 31 Mar 64 when all clinics in the Ottawa area were removed from No 13 Dental Coy's jurisdiction, in order to form No 1 Dental Detachment RCDC.

Administration

At the time of its organization, No 13 Dent Coy was placed under HQ Eastern Ontario Area in Kingston for local administration. However, the Commanding Officer was also Command Dental Officer, and as such had a direct channel of communication with HQ Central Command. He also dealt directly with the Directorate of Dental Services on matters of Corps policy, and any subject of a professional nature.

The HQ personnel of this unit were attached to the local RCAF Command HQ and provided with considerable administrative support from this source. In 1949 Trenton became HQ for Air Training Command, which remained for 10 years before being moved to Winnipeg. At this time Air Transport Command was established at Trenton, from where it now controls its world-wide passenger and cargo operations.



Canadian Guards prepare
to board a 'Hercules'
at CFB Trenton -
Operation Quivive

The availability of aircraft for transportation of dental detachments to the several part-time clinics situated in remote areas of Northern Ontario is particularly advantageous. Most of these are in locations where no easy access to civilian dental practitioners is possible, and must rely on periodic visits of No 13 Dental Coy personnel for dental attention. However, in only one of these sites, at Moosonee, are service dependents the responsibility of the RCDC.

Personnel

The total strength of No 13 Dental Coy at the time of reorganization was 11 officers and 36 other ranks. These figures moved steadily upwards with the enrolment of new members as the requirement for dental treatment increased due to the expansion of military organizations in Ontario. The authorized establishment reached a peak of 47 officers and 71 other ranks in 1951, and then dropped in 1960 and again in 1964 due to the loss of clinics in Camp Borden and Ottawa. Following the most recent establishment changes, the totals now read 28 officers and 62 other ranks. In addition one civilian dental officer and nine dental nurses are currently employed.

Over the years this unit has enjoyed a gradual up-grading in rank structure, in keeping with the general trend throughout the Corps. Originally the position of Commanding Officer was in the rank of Lieutenant-Colonel; in 1953 this was raised to Colonel. No 13 Dental Coy has been commanded, over the years, by a succession of highly qualified officers, the majority of whom moved on to positions of greater responsibility in the Directorate of Dental Services. The original Commanding Officer of the unit was Lt-Col RE Carroll, who was followed in 1949 by Lt-Col FR Drewry, recently deceased. In Nov 1950, Lt-Col Drewry was stricken seriously ill and underwent a period of hospitalization and sick leave which extended until his return to duty in late Jan 1951. During his absence Major AC Leman and Lt-Col RE Carroll assumed command of the Coy. In March of that year Lt-Col HL Harris was appointed to command, a position he held until Jul 1953, when a cross-posting was made with Col KM Baird from No 12 Dental Coy, the latter being promoted at that time.

A major change in the new establishment, effective in Jul 1951, was the addition of a Lieutenant-Colonel Senior Specialist. The first appointment to this vacancy was Lt-Col IAL Millar. An additional Lt-Col vacancy was provided in 1954 when a Senior Operator in the person of Lt-Col AC Leman was authorized.

These positions were later increased to three and the designation changed to Senior Clinician. Another establishment change was the inclusion of an Administrative Officer on the HQ strength. WO 2 GR Woodcock was promoted to Lieutenant to fill the position in 1954. Previously the Captain/Quartermaster had been the only 'non-dental' officer in the unit.

In Jul 1956 Col Baird joined the Directorate Staff and Lt-Col WM Sinclair assumed command until April of the next year when Col JA MacGowan was appointed Commanding Officer. He was succeeded in June 1959 by Col AC Leman, who remained in Trenton until 1963, when he was posted to Ottawa, to the staff of DGDS. Col AT Roger assumed command at that time and on his retirement from the Armed Forces in 1966 was succeeded by Col RHG Cunningham, the present Commanding Officer.

The position of Laboratory Officer was created in 1960 and Captain JW Lincoln was commissioned from WO 1 to fill the position. He continued in his employment as Senior Technician in charge of the Central Laboratory in Trenton, until his retirement in 1965.

During this time other auxiliary trades were being developed by DGDS, and this unit provided its share of candidates for training at The RCDC School.

To alleviate the chronic shortage of trained dental assistants a decision was taken in 1950 to hire civilian dental nurses, with a preference for those having some years of experience. In due course thirteen vacancies were allotted and a like number of applicants accepted for employment in various clinics throughout the unit.



No 15 Clinic Staff - RCAF Station Trenton - Sep 61

Seated L to R - Sgt Vout AC, WO2 Riddell EW, Capt EW Gazo, Lt-Col RHG Cunningham, Maj JG Andrews (Deceased), Capt JW Lincoln, Sgt Gilbert WD
Standing L to R - F/S Savage PE, AWL Reddy ME, Cpl Palmer KP, Pte Stenabaugh, Mrs BL Darling, Sgt Raymond JE, Cpl Brennan JA, AWL Carroll DL, LAW Hughes

RCAF airwomen have also rendered very useful service in the trade of dental assistant. These service women are employed on RCAF Stations where suitable accommodation can be provided.

Accommodation

At the time of its organization in 1946, the HQ of No 13 Dental Coy was accommodated in a building housing the Supply Section at RCAF Station Trenton. The QM Stores was relegated to a corner of the Seaplane hangar. However in early 1947, both HQ and Stores were moved to the Station Hospital building. This rather inadequate space was utilized for a number of years until a complete "H-hut" of war-time construction was made available in 1956. Renovation of this building provided plenty of area for offices and orderly room and for a roomy QM Stores. There was a space for reception and despatch of shipments, for systematic stocking of consumable and non-consumable items, as well as a repair department where servicing of equipment could be carried out.

During the years following the Second World War many of the 'temporary' frame buildings which had been used as war-time clinics were retained in service, or re-opened, and in some cases enlarged.

These had been satisfactory during the pressure of mobilization and fitted in with war-time economy, but in many cases post-war maintenance became an ever increasing problem.

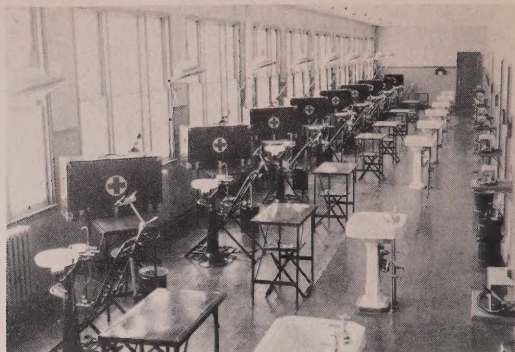
In early 1948 it was announced that Camp Petawawa was to be reactivated and in a short time one of the war-time clinics was in operation.

At RCAF Station Trenton the clinic was set up in the hospital, and in 1949 a clinic at the adjacent Repair Depot was opened. A new building of brick construction was approved for Trenton in 1954, which was specifically designed for efficient clinical operation. This included a large Central Laboratory and a chrome-cobalt casting layout.

War-time clinic - 1943

Barrie-field Camp

Used for several post-war years



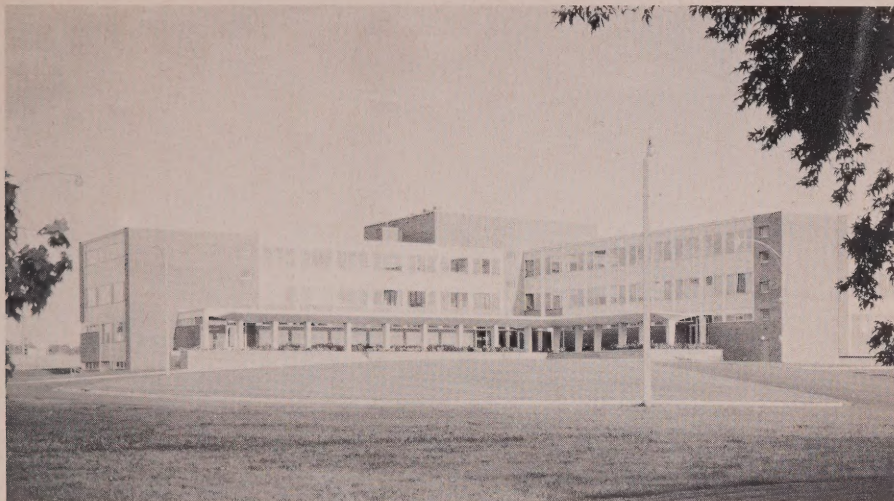
During the year 1950 clinics were opened at a number of military establishments, including Toronto Military Hospital, HQ Central Command Oakville and RCAF Station Mount Hope. The following year additional dental treatment centres were provided at RCAF Station Uplands, Camp Picton, Camp Ipperwash and 26 COD in Ottawa. A clinic at RCAF Station North Bay was functioning by 1952, as were part-time operations at the radar sites at Edgar, Foymount and Falconbridge. Radar sites at Ramore, Lowther and Pagwa, which had been the responsibility of the US Air Force, were transferred to RCAF control in 1962-63 and No 13 Dental Coy fell heir to the clinic accommodation and equipment in these locations.

At infrequent intervals certain clinics were closed as the establishments they served were transferred elsewhere or disbanded. No 26 COD was moved from Ottawa to Cobourg in 1954, while 27 COD at Hagersville was closed in 1963. RCAF operations at Mount Hope and Aylmer were discontinued.

From time to time it became possible to arrange for clinics to be transferred from older buildings into accommodation of more permanent construction. In general a policy of economy has dictated the utilization of quarters not required for other purposes, rather than erection of new clinics of functional design. Considerable ingenuity has been required to adapt rooms of unsuitable size and layout to fill the needs of a dental clinic, when it is considered how extensive are the plumbing and electrical demands. In common with the medical services, it has frequently been necessary to utilize surplus officers' quarters or barrack buildings. Usually these make quite satisfactory clinics, provided an adequate number of rooms is allocated, and most are superior to the renovated war-time clinics. An example of the latter is at Camp Petawawa, where an old building underwent a complete interior overhaul involving a heavy outlay of funds. It must be admitted that the result is a great improvement, but it is still far from ideal. At RCAF Station Rockcliffe an excellent clinic was created from an old dilapidated building which was moved from another site, veneered with brick, and the interior completely renovated.

One clinic worthy of special mention is that which is accommodated in the Canadian Forces Hospital at Barrie-field, Ontario. Early in the planning it was decided that the dental clinic would be incorporated in this new hospital. The Directorate of Dental Services was assigned the task of laying out a clinic to be part of a modern accredited teaching hospital. Working closely with the Directorate of Works (Army) and the civilian architectural consultants, this facility was developed. The resulting establishment is a credit to the dental profession and an example of what can be produced when designers and users work in close co-operation. The clinic is located in the west wing of the first floor and has its own entrance adjacent to the outpatient department of the hospital. There is convenient access to the various hospital services, wards and operating rooms. The clinic consists of a large waiting room, two offices, three private operating bays, an x-ray bay and a prosthetic laboratory which accommodates two technicians. These facilities coupled with ready

access to hospital services, provide an ideal situation for rendering effective treatment.



Canadian Forces Hospital - Kingston

With the advent of new auxiliary tradesmen it has been necessary to negotiate for additional working space in a number of locations. These efforts have not always been immediately successful, being subject to the availability of surplus accommodation.

Training

The members of this unit have benefited from a comprehensive programme of training which has been developed over the years by the RCDC Directorate. Military courses resulting in qualification for promotion have been attended regularly by junior officers and other ranks. Professional advancement has been maintained through courses given at The RCDC School as well as at Canadian and American Universities and Service Training Establishments.

For a number of years, during the period 1948-52, RCDC Cadets, whose dental education was being subsidized in part by the Department of National Defence, were employed in clinics of this Company. This constituted their third phase training and involved a period of approximately twelve weeks. Some eight to twelve undergraduates participated in this programme each summer until it was taken over by The RCDC School.

Conclusion

This brief historical account of No 13 Dent Coy has outlined changes in the Unit's strength, establishment and accommodation which have occurred since its organization some 20 years ago. As progress is made towards integration of the Forces, it may be anticipated that further relocation of this Unit's resources may become necessary in the future.

CURRENT THOUGHTS ON CROWN AND BRIDGE

Major D.E. McDermott, CD, DDS



The thoughts and suggestions presented in this article have been gleaned from various dental textbooks, journals, courses and discussions with board qualified prosthodontists. The aim is not to present a comprehensive outline of the considerations in planning and constructing fixed partial dentures, but rather to discuss recent concepts regarding pulpal response and operative procedures which have proved helpful to the author. Some fundamental principles are re-stated in the hope that they may prove helpful to the reader.

Treatment Plan

The success of any restoration depends upon the treatment plan, and this must be formulated using all available aids. Relying upon experience and judgement, a tentative plan is produced which must be flexible and viewed with a sense of "continuing" diagnosis. A willingness to vary the treatment plan as required must be the rule.

Biological and physiological variations between patients are often overlooked. All patients do not respond alike to the same treatment plan. The following requirements must be recognized:

1. The patient's treatment requirements;
2. The patient's tolerance for the proposed treatment (i.e. patient selection);
3. The treatment must fall within the operator's capabilities.

Biologic Considerations of the Pulp

Recently, Dr. Stanley of the National Institute of Dental Research, Bethesda Maryland, presented a lecture series in which he discussed pulpal reaction to various stimuli. There has been much speculation regarding the biologic response of the pulp to high speed techniques. Most American dentists do cavity preparations in a wet field. It is contended that high speed preparation is so gentle to the pulp that the formation of reparative dentin is not stimulated. Thus, when the restoration is cemented, the free acid in the cement can readily reach the pulp through dentinal tubules. Research has indicated that where secondary or irregular dentin is formed, the pulp is protected against any insult in that area. It has also been found that the irregular or sclerosed dentin which lines a filled amalgam cavity has the same protective character.

After experimentally preparing and filling a non-carious tooth it was concluded that something in the amalgam, or the reaction of the amalgam and cement (zinc oxyphosphate), stimulates the odontoblasts to lay down secondary dentin. This sclerosing of dentin is a highly desirable result since it affords superlative protection to the pulp.

It was also observed that it is not easy to injure a pulp through

operative procedures so long as there remained a two millimeter covering of dentin. However, once inside the two millimeter limit, the pulp is susceptible to injury, particularly with the dry high speed dry technique. Having penetrated the enamel of anterior teeth, normally the two millimeter range from the pulp has been reached. The critical area in posterior teeth is reached following penetration of the enamel in the proximal surfaces. It has been shown that reparative dentin is not laid down in an area injured (i.e. burned) by the dry high speed technique. The pulp will die in from two to fifteen years depending on the severity of the injury regardless of ensuing palliative treatment. Hence, operating in a dry field is a hazardous procedure.

On the other hand, dentin exposed to the washed field and high speed suffers virtually no irritation; but the open dentinal tubules are subjected to continuous water spray being gently forced in by the rotation of the bur or point, creating (by absorption) a sponge - like tooth. The immediate use of oxyphosphate cements under these circumstances is contra-indicated due to the danger of free acid reaching the pulp too readily. A temporary crown filled with one of the zinc oxide-eugenol cements is recommended to give the tooth time to adapt with secondary dentin.

Pulp Cappings and Pulpal Reaction

Current research on such materials as Mosteller's Solution and calcium hydroxide, and the effect of air drying of teeth will be briefly outlined.

Mosteller's formula contains prednisolone and is of value in reducing sensitivity of teeth only if dentin lies between the pulp and the cavity. It is of no value in cases of pulp exposure and causes a severe reaction if the solution contacts the pulp directly. The solution is only recommended for teeth known to be sensitive and which in the operator's opinion may give trouble later.

When using calcium hydroxide solutions (Dycal) for pulp capping, it should be realized that it must come in contact with the pulpal tissue. A dentin bridge forms in the area of contact as regeneration occurs. Hemorrhage must be stopped before the calcium hydroxide is applied, otherwise an embolus of this material can occur within the pulp. It is considered that this may be a cause of failure in pulp capping procedures; the theory being that the deeper layers of the pulp are exposed to emboli of calcium hydroxide which ultimately lead to the strangulation of the upper layers. After controlling the hemorrhage, calcium hydroxide must be applied without pressure and allowed to harden, coated with copalite varnish, and finally by a layer of cement also applied without pressure. It should be pointed out that the effective exclusion of bacteria from the site will almost ensure success.

Another facet of pulpal response attracting considerable attention is the role of the dental interstitial fluid. The maintenance of the equilibrium of this fluid is thought to be of paramount importance. Beveridge (6) believes that a serious insult to the pulp is created when a tooth is prepared in a dry field with only air as a coolant. The air drying of teeth during preparation and the evaporation of dental interstitial fluid upsets the physiologic balance between extracellular fluid pressure, and the intracellular and intercapillary fluid pressures. This initiates a massive displacement of odontoblast nuclei into the adjacent dentinal tubules, resulting in eventual pulp death. Beveridge concludes that preparations should be done with a water or air-water spray coolant and, in fact, predicts that an isotonic coolant will be used in the future. The prolonged use of compressed air is strongly contra-indicated by his findings.

Miscellaneous Principles and Procedures in Crown and Bridge

During the years of general practice since graduation, the author's difficulty in extrapolating what has been read and heard to the clinical

situations encountered has been considerable. From this background of attempting to assess the value of various teachings, techniques, and the personal preferences of many operators, the author proposes to present some ideas which may be of clinical value to others.

Centric Relation and Centric Occlusion

Before constructing any bridge, centric occlusion and centric relation must be brought into harmony. Centric relation is a definite position upon which the existence or non-existence of teeth has no bearing. The mandible is in centric relation when the heads of both condyles are in the most retruded position in the glenoid fossae from which lateral and protrusive movements can be made at a given degree of jaw separation. On the other hand, centric occlusion is a contact position. It very often is a habitual functional position which does not necessarily coincide with centric relation. In order to bring the two relationships into harmony, all premature contacts in the various mandibular excursions must be corrected and extruded teeth adjusted to conform with the occlusal plane.

A simple device to aid in detecting prematurities is illustrated. Using quick cure acrylic and models of the patient's mouth, make two acrylic plates, extended enough to provide stability and each with a flat plane as shown in cross-section.

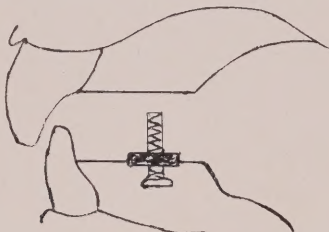


Fig. 1

In the lower plate an ordinary nut and bolt is inserted during the fabrication so that the bolt is free to move up and down by turning it. The bolt is adjusted against the upper plate. As the patient moves his jaw, a gothic arch tracing can be obtained. Having him close at the apex, by gradual adjustment of the bolt the prematurities can be detected. The most common location requiring adjustment is the maxillary bicuspid region.

Control of Saliva

Operative procedures are made easier if the operator has a clear view of the field in which he is working, and the successful completion of crown and bridge restorations demands this condition. Assuming that the patient is normal, 15 mg of Probanthine should be administered one hour before the appointment and a further 15 mg as the patient is seated. When required, it should be used both at the tooth preparation stage and also at the final cementation. It is contra-indicated for patients with glaucoma, liver infection and prostatitis.

Parallelism

Since most clinical cases seldom present ideal or perfectly aligned abutment teeth the problem of parallelism is a recurring one. The teeth to be used may be carious, extruded, retruded, or rotated; and all of these conditions complicate the procedure. X-rays, study models and the clinical

examination must all be given careful consideration in properly planning the type of abutment and the direction of slices, pits and grooves to be used.

One method of developing ones ability to construct parallel abutment attachments is to repeatedly practice drawing parallel lines an inch or so apart on paper.

When tipped or rotated teeth must be used, the tooth least out of alignment should be used as a guide and should be prepared first. With this as a guide, the other slices and grooves are made parallel to it, to some extent ignoring so called normal surfaces - mesial, distal, buccal, etc. Attaining parallelism can be simplified by using some line or plane as a reference point. Such a guide may be another tooth, an occlusal surface, a proximal surface, etc.

Establishing a Finish Line in Full Crown Preparations

After bulk reduction and outline for preparation, the bur or stone is angled as shown in Fig. 2.

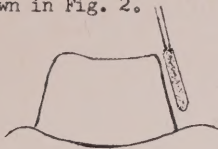


Fig. 2



Fig. 3

To create a definite finish line or chamfer, change the direction of the bur as indicated in Fig. 3. This will also produce a cuffing effect which will increase the retention of the crown.

Creating Space for Anterior Jacket Crowns

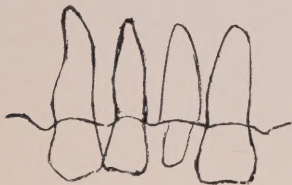


Fig. 4

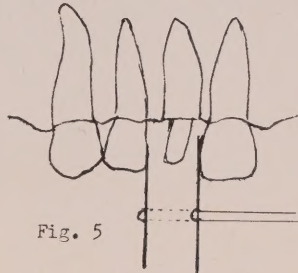


Fig. 5

In the case illustrated, the right central incisor is to be crowned. The available space for the crown is less than the width of the left central incisor, either because of crowding, or drifting following the carious breakdown of the right central. With a disc some of the mesial enamel can be removed from the lateral incisor and also some from the mesial of the left central. A Boley gauge will aid in determining the amount to be removed so that the jacket crown will match the other central in size.

It is also suggested that the operator should never fail to correct the contact points of adjacent teeth when preparing crowns or bridges. Often an adjacent tooth has an amalgam restoration for which the contour can be considerably improved, simply by sandpaper discing once the contact has been opened up during the preparation. This ensures a better result and is a real service to the patient.

Should the contact point between the crown and natural tooth be a "ball"

contact? It should be, provided the natural tooth presents unworn contacts. However, if the contact point of the natural tooth has become enlarged through wear, then the crown should present a small surface of contact. In summary, ball to ball contact is excellent, but ball to surface contact is not desirable.

Cuspid to Cuspid Fixed Bridges

The question of preference between the 3/4 crown and full crown as an abutment in the cuspid to cuspid fixed bridge is often contended. The 3/4 crown has some advantages which include durability, ideal esthetics, minimal cutting of tooth structure, little gingival irritation and good retention under ideal conditions. It is, however, contra-indicated when any of the following conditions prevail:

1. short crowns,
2. thin teeth (labio-lingually),
3. cuspids with a marked taper,
4. when the caries index is high,
5. when the cuspids are rotated or malposed.

In all of these situations the full veneer crown is preferable. The question of double abutments will not be discussed. Individually, there can be no doubt that the full crown provides more retention than does the 3/4 crown.

Grooves

A cylindrical groove is more desirable than a tapered groove in that it provides greater retention.



Disengages as
it slides up.

Fig. 6



In contact all
the way up.

Fig. 7

As can be visualized from the diagrams, contact in the groove area between the crown and the tooth is not made until the crown is completely 'home to place' when the grooves are tapered (Fig. 6.); whereas when the grooves are cylindrical (Fig. 7.) contact in this area is made continuously as the crown slides to place and much greater retention is attained.

In paralleling grooves, the bur should be watched rather than the environment, and movement should be free hand. Every operator has what might be termed a 'built-in paralleling mechanism'. Having completed the first groove, one should return to it to check alignment while preparing additional grooves.

Suggestions for Avoiding Pitfalls in Crown and Bridge

1. Molar Full Crown Preparations

When preparing molars for full crowns, the occlusal surface should be reduced following the cuspal anatomy so that a "pot-hole" effect is produced. Circumferential irregularity in the preparation, rather than the cylindrical shape, greatly improves resistance form.

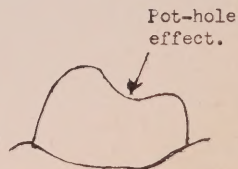


Fig. 8

2. Achieving Dryness Prior to Impression Taking

Before taking an impression, both dryness and tissue retraction must be

achieved. Extra heavy weight rubber dam has great retracting ability and can be used alone as the method of tissue retraction. Gingi-pack cord may be used as an alternative. A small bladed plastic filling instrument is useful in placing the cord which should remain in place for ten minutes. Rubber base impression material will not flow into a sulcus that isn't dry. Before removing the cord the sulcus should be blown dry, because an attempt to dry it after removal usually results in hemorrhage.

3. Rubber Base Impression Material

Before using rubber base impression material, the tubes should be massaged in order to remix the contents. There is a tendency for the components to separate out during storage. If the spatula is coated with the catalyst, a more uniform mix will be produced. Contrary to popular belief, rubber base impression materials are not dimensionally stable, because shrinkage takes place due to polymerization. The model should be poured up within twenty minutes. Within thirty minutes demonstrable shrinkage has occurred and after two hours this change almost doubles.

4. Impression Pouring

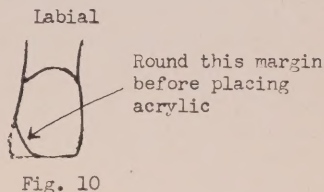
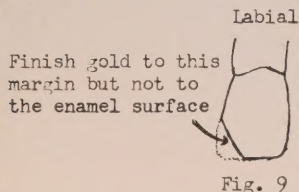
When pouring up an impression, whether a rubber base or other material has been used, only the crowns should be covered with cast material initially. After the initial pour hardens, then a second pour is used to complete the cast. Pouring the full cast with one mix of material produces too much weight on the impression material and causes distortion.

5. Pontics

Only two types of pontics are recommended - the conical or egg-shaped type for mandibular bridges, and the ridge-lap type for maxillary bridges. The pontic should never touch moveable tissue. The base of the pontic should be concave with as little contact with the tissues as esthetics will permit. On the lingual aspect, embrasures should be wide to ensure as much self-cleansing as possible.

6. Fractured Anteriors

When preparing fractured anteriors for which the restoration of choice is a gold inlay with an acrylic facing, the gold should be finished to the broken surface as indicated in Fig. 9.



After the inlay has been cemented to place, before inserting the acrylic, the enamel margin should be bevelled slightly so that the acrylic does not form a butt joint with the enamel, resulting in a noticeable line.

7. Temporary Crowns

When fabricating temporary acrylic crowns, they should be made thick at the gingival margin in order to obtain a butt joint without ragged margins. The cement won't show and the crown will be stronger, more esthetically pleasing and more acceptable to the soft tissue.

8. Acrylic Veneer Full Gold Crown

In order to compensate for the shrinkage which occurs with all acrylics, the gold face should be undercut completely as illustrated in Figs. 11 and 12. As the acrylic shrinks, it becomes tightly locked in the undercut area and seepage of saliva will be minimal.



Cross-section

Fig. 11



Undercut completely
as illustrated in
cross-section

Fig. 12

9. Gold Castings

Castings fit better when they are etched with aqua regia. This permits better seating and also provides a slight space to accommodate the cementing medium.

10. Soldering Bridges

If the crowns and pontics of a bridge are tightly butted together prior to soldering, the expansion during heating will cause movement of the components and thus distortion of the soldered bridge. The space required between the components is slight, perhaps as little as .005", but it is essential.

Summary

An attempt has been made to review some of the fundamental principles which should be constantly born in mind when practicing operative dentistry, and in particular when designing and constructing crowns and bridges, if success is to be realized. Also a series of suggestions have been outlined concerning techniques which have been recommended by various authorities and have proven to be of value to the author. It is hoped that these suggestions may serve as an aid to the reader in avoiding some of the pitfalls prevalent when practicing this branch of dentistry.

1. Ewing, J.E. Fixed Partial Prosthesis. 2nd ed., Philadelphia, Lea and Febiger, 1959, 288 p.
2. Schweitzer, J.M. Restorative Dentistry. St. Louis, Mosby, 1947.
3. Johnston, J.F., Phillips, R.W., Dykema, R.W. Modern Practice in Crown and Bridge Prosthodontics. 2nd ed., Philadelphia, Saunders, 1965, 420 p.
4. Wilson, W.H. and Long, R.L. Practical Crown and Bridge Prosthodontics. New York, McGraw - Hill, 1962.
5. Schweitzer, J.M. Oral Rehabilitation Problem Cases; Treatment and Evaluation. Vols 1 and 2, St. Louis, Mosby, 1964.
6. Beveridge, E.E. Pulp Physiology, breaking the inside story; South Calif. S. Dent. A.J. Sep. 1966.
7. Dix, L.H. Construction and Insertion of Cast Gold Restorations; Northwest Dent. 16, Jan-Feb. 1966.
8. Klecinic, E. American Board of Prosthodontists. Personal Communication. Oct. 1966.

Acrylic resin fillings should be finished and polished no less than 24 hours after insertion to avoid causing internal strains which may cause the restorations to craze.

J. Pros. Dent. 16:143, 1966

BOARD OF CONSULTANTS TO THE
ROYAL CANADIAN DENTAL CORPS

On 5 Jan 60 an Order was issued under the authority of Section 4 of the National Defence Act authorizing and constituting a Board of Dental Consultants to advise the Director General of Dental Services of the Royal Canadian Dental Corps on matters relating to specialized fields of dentistry.

The Board of Dental Consultants consisting of highly respected members of the profession and leaders in their specialized fields are invited to serve for a period of three years with the opportunity for extension of the appointment for a further period. They serve as an advisory board on specific dental problems, as well as on the broader aspects of treatment policy and the training of dental officers and auxiliary personnel.

Consultants serve without remuneration, although repayment of travel costs and out-of-pocket expenses when engaged on official duties of their appointments has been approved by Treasury Board.

In order to ensure a broad coverage of the dental specialties individuals were originally appointed from eight different fields of dental interest, namely:

- Oral Surgery
- Periodontics
- Orthodontics
- Oral Diagnosis and Roentgenology
- Prosthodontics
- Dental Ethics
- Restorative Dentistry and
- Dental Research.

In addition, authority was recently obtained to appoint a Consultant in Dental Public Health, a field which has become prominent in public and service interest.

As far as possible and in addition to their pre-eminent position in the profession, previous service records and geographical locations of those appointed have been considered.

As a gesture of appreciation for participating on the Board, each consultant has been presented with a suitably engraved framed certificate.

Although only one formal meeting of the Board has been held since its inception, DGDS has benefited from the services of the Consultants on many occasions and their willing response has been greatly appreciated. They have submitted articles on various subjects which have been published in the RCDC Quarterly from time to time. Full co-operation and assistance has been pledged by members who have been newly appointed and has been reaffirmed by those who have accepted reappointment.

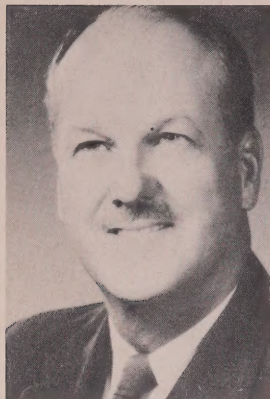
During the past year, having completed a second term of service, Dr. Donald W. Gullett retired from the Board. Dr. W.G. McIntosh has kindly consented to accept the appointment as Consultant in Dental Ethics.

Dr. R.A. Connor has accepted the newly established appointment as Consultant in Dental Public Health.

To those who have completed their term of service and are retiring from active participation on the Board, and to those members who have accepted the invitation to serve for an additional term, sincere thanks and best wishes are extended from the DGDS and all members of the Corps. To the new members, the DGDS bids his welcome.

Following are biographical sketches of the members of the Board.

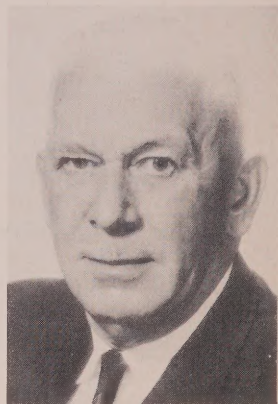
Consultant in Orthodontics



Dr JE Abra, DDS, FRCD(c), of Winnipeg, graduated from the University of Minnesota Dental School in 1931 and took post-graduate training in Orthodontics there in 1932. Since that time, apart from war-time service, his practice in Winnipeg has been limited to Orthodontics. He joined the CDC in 1939 and later commanded No 6 Company in Northwest Europe. Dr Abra has served in an executive capacity in many organizations both dental and non-dental, Canadian and American. He is a past-president of the Canadian Society of Orthodontists and of the Midwestern Section - American Association of Orthodontists. He became a member of the Board of Governors of the CDA in 1965 and was a member of the Board of Directors, American Association of Orthodontists, 1964-65. From 1948-58 he served as a consultant at the Winnipeg Children's Hospital and since 1960 has been a member of the Dental Faculty, University of Manitoba.

Consultant in Dental Public Health

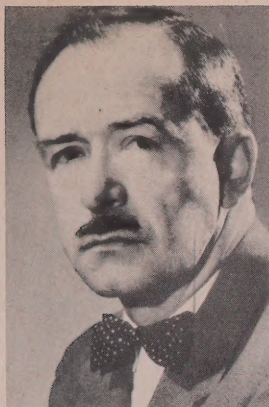
Dr RA Connor, DDS, DDFH, FICD, of Ottawa is Chief of the Dental Division, Department of National Health and Welfare. He graduated from the University of Toronto in 1933 and practiced in St Thomas Ontario until 1939 when he joined the Canadian Armed Forces. He first served as an Infantry Officer (Elgin Regiment), later transferring to the CDC. Dr Connor obtained a Diploma in Dental Public Health at the University of Toronto in 1949 and since then has held several appointments pertaining to that specialty in Ontario and Manitoba, culminating with his present appointment with the Federal Government. He was a member of the Faculty of Dentistry, University of Manitoba from 1960-63. He has served on various Committees and councils relating to public health and dental public health in both Canadian and International organizations. At the present time he is President, Canadian Society of Public Health Dentists and also an Advisor to the Public Health Services Commission of the International Dental Federation.



Consultant in Oral Surgery



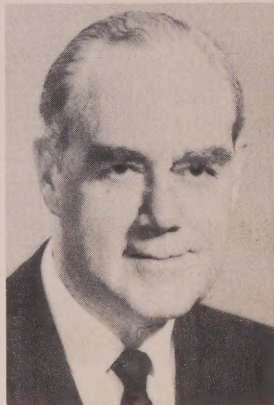
Dr JP Coupland, DDS, FACD, FICD, FRCD(c), of Ottawa has limited his practice to Oral Surgery since graduation from the University of Toronto in 1930. He served with the CDC from 1943-45, retiring with the rank of Major. He is Consultant in Oral Surgery to the Dental Department, Ottawa Civic Hospital. Dr Coupland has held the following offices in organized Dentistry: President, Eastern Ontario Dental Association - 1937; Director, RCDS of Ontario since 1959; President RCDS of Ontario 1965-66; Member CDA Council on Legislation 1948-54 and its Chairman 1953-54; Member, CDA Board of Governors since 1959; Member, CDA Executive Council since 1961; President, CDA, 1966-67. He has appeared as a clinician on programs of most Canadian and many American Dental Conventions and scientific meetings.



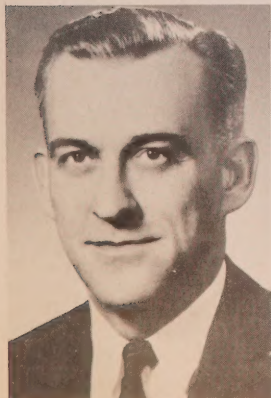
Dr JF Lussier, BA, DDS, BSc, MS, PhD, FACD, is Dean and Director of Studies, Faculty of Dental Surgery, University of Montreal. He received his DDS from the University of Montreal in 1942, later engaging in post-graduate work in Physiology at that University and in Endocrinology at the University of California. He has served in various capacities on both the Dental and Medical Faculties of the University of Montreal. Dr Lussier has served as an executive with many Canadian and American dental organizations, particularly those involved with education and dental research, including the following: Chairman, Council on Dental Education, CDA, 1960-63; Chairman, Associate Committee on Dental Research, National Research Council, 1963-66; Member, Sub-committee on Dentistry, Department of National Health and Welfare, since 1965. He is the author of many published papers in the field of dental research.

Consultant in Oral Diagnosis and Roentgenology

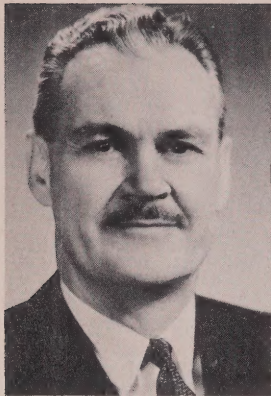
Dr HR MacLean, DDS, FACD, FICD, FRCD(c), is Dean of the Faculty of Dentistry, University of Alberta. He graduated from the University of Alberta in 1928 and has been associated in a teaching capacity with that University since 1935, becoming Professor of Operative Dentistry in 1946. He did post-graduate work in Oral Roentgenology at the University of California in 1955-56. Dr MacLean is an active member of the American Academy of Gold Foil Operators and the American Academy of Oral Roentgenology. He has been a member of and has held executive positions in various dental organizations including the following: President, Alberta Dental Association; Executive Committee, Board of Governors, CDA; President, International College of Dentists (Canadian Section); Member, Organization Committee to form the National Dental Examining Board. Dr MacLean is a member of the Executive Council of the American Association of Dental Schools and a member of the National Examining Board.



Consultant in Prosthodontics



Dr J McCutcheon, BA, DDS, MSD, FACD, FICD, FRCD(c), Dean of the Faculty of Dentistry, McGill University, received his DDS from that institution in 1945. Following graduation he undertook post-graduate training at the University of Michigan and obtained his MSD in Prosthetic Dentistry. He holds the appointment, Dental Surgeon-in-Chief and Director, Department of Dentistry, Montreal General Hospital. He is associated with the following professional organizations: Member, Board of Governors, College of Dental Surgeons of the Province of Quebec, and of several committees within that organization; charter member and past-president, The Canadian Academy of Prosthodontics. Dr McCutcheon has also served with various other organizations involved with health and education, and at the present time is chairman, Council on Education, CDA.



Dr WG McIntosh, DDS, MSD, FACD, is Secretary of the Canadian Dental Association, having received that appointment in 1965. Upon obtaining his DDS from the University of Toronto in 1937 he entered private practice. From 1942-46 he served with the CDC retiring with the rank of Major. Following the War, he became associated with the University of Toronto both in a teaching capacity and in post-graduate work in Periodontics. He also took courses in this specialty at the Universities of Michigan and Alabama, obtaining a MSD from his Alma Mater in 1957. Dr McIntosh has been a hospital consultant in Periodontics and has held many executive positions in dental organizations including the following: Member, CDA Board of Governors and serving on several committees; Chairman, Research Committee, American College of Dentists; President, Canadian Dental Association, 1959-60.

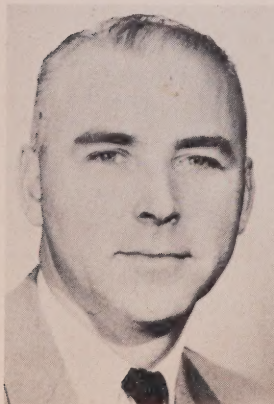
Consultant in Restorative Dentistry

Dr James D McLean, DDS, FICD, FACD, Dean, Faculty of Dentistry, Dalhousie University, graduated from the University of Toronto in 1942. Upon graduation he served in the CDC in England and Northwest Europe, retiring in 1946 with the rank of Captain. He engaged in one year of post-graduate study in fixed partial prosthesis at the University of Minnesota prior to joining the Faculty of Dentistry, University of Alberta in 1947 as part-time lecturer and Associate Professor in this specialty. In 1953 he was appointed Professor of Dentistry at Dalhousie University and Dean of the Faculty of Dentistry in 1954. Dr McLean has acted in an executive capacity in the Canadian Dental Association as: Chairman of the Committee on Ethics 1949-58; and Chairman of the Council on Dental Education 1958-62. He has served as Consultant at the Victoria General Hospital, Halifax and at the Halifax Children's Hospital and has been active in other organizations including the Canadian Red Cross Society.



Consultant in Periodontia

Dr JW Neilson, BA DDS, MS, FICD, FACD, FRCD(c), Dean of the Faculty of Dentistry, University of Manitoba, received his DDS from the University of Alberta in 1941. Upon graduation he served with the CDC in Canada, UK and Northwest Europe, retiring from the Army as a Captain in 1945. He received his MS (Dentistry) from the University of Michigan in 1946 and became Head of the Department of Oral Pathology and Periodontology, University of Alberta, in 1947. After a period on staff of the Dental Faculty, University of Washington, Seattle, he was appointed Dean of the Faculty of Dentistry, University of Manitoba, in 1957. He is a Diplomate of the American Board of Periodontology and has served in an executive capacity in many professional organizations concerned with education, qualifications and research, both in Canada and the USA. Dr Neilson has been a speaker, essayist and clinician at many dental meetings and is the author of numerous published papers.



FOLLOWING DIRECTIONS-IN THE DARKROOM

WO 2 Everett E.M.B.

Great emphasis must be placed on the importance of following the manufacturers' instructions in the use, operation and maintenance of dental supplies and equipment. This concept is stressed by the Ritter Company of Rochester, N.Y. with whom the author of this brief article recently completed a course for dental equipment technicians.

Precise techniques have been established in using the x-ray machine which, if observed, should routinely produce good radiographs providing properly stored, unexpired film is used. However, "processing pitfalls" may occur in the darkroom and the dental assistant must be constantly concerned with avoiding these if radiographs of good interpretive quality are to be produced. This article is concerned only with darkroom processing pitfalls.

Improper Lighting

How safe is the safelight? Safety is a matter of light intensity, plus distance, plus the length of time the film is exposed to the safelighting. The Kodak Company recommends a Wratten Series 6B or M1 Safelight Filter with a 7½ watt bulb four feet from the working surface for a one-minute interval. No lighting is safe if x-ray film is exposed to it for too long a period. Bare red bulbs should never be used. An unsafe safelight can produce a "dense image". Of course the room itself must be lighttight and should be periodically checked by closing the door, waiting until the eyes become accustomed to the darkness and then looking for minute light leaks around the door.

Improper Developing Time and Temperature

Chemical fog, recognized by a general grayness in the light areas of the film, can be caused by too long developing time and by developing solution which is too warm. A "thin image" may result from insufficient development or from cold developing solution. A "dense image" can be caused by overdevelopment or the use of a warm developing solution. Thermometers and timers should be checked periodically for mechanical efficiency.

'Worn Out', Improperly Mixed, and Contaminated Solutions

Solutions falling into any of these categories will produce unsatisfactory results. As emphasized previously, the manufacturers' instructions regarding the preparation and use of solutions must be followed "to the letter".

Solution Levels

Partial recording of the tissue area covered by the packet in the mouth may be caused by immersion of only part of the film in the tank or by the films touching the tank side or another film during development. Some evaporation occurs in a developer solution and dry films soak up a quantity of solution which is lost when the film is transferred to the rinse tank. Solution levels must be checked and films carefully placed on clean hangars for processing. Films in contact during development prevents the solution from reaching parts of the emulsion, resulting in inadequate development.

Agitating the Film

Many types of artifacts can appear in the processed film which increase

interpretive difficulties. When films are first placed in the developing solution they should be agitated to break loose any air bubbles that may be on the surface of the film. An air bubble restricts the developer's action on the emulsion and a spot can result.

Cleanliness

Careless procedures in handling the film such as splashing solution on to the working area can result in white blotches on the radiograph. Clip lines often appear after using a clip that has not been properly washed after previous immersion in fixing solution. The dried chemicals dissolve in the developer, run down the surface of the film and are recorded in the emulsion.

Conclusions

The list of pitfalls which can occur in the darkroom is a long one. It is said that a picture is worth a thousand words. This is certainly true of the value of a radiograph to the dental officer; but it must be a good one, and this is dependent upon proper handling in the darkroom. Let us follow the manufacturers' instructions carefully, check the darkroom, and remember that when processing film we need not be 'in the dark' to radiodentic pitfalls. Having checked the common errors listed in this article, if anyone continues to have a darkroom problem, he should call on the friendly boys at equipment repair.

1. Sweet, A.P.S. Radiodentic Pitfalls. Eastman Dental Company, Rochester, New York.
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Commemorative Wall
The RCDC School

Brig KM Baird, formerly DGDS, and Col GR Covey, Commandant of The RCDC School, are shown standing beside the beautiful Commemorative Wall at the main entrance to the School. The Wall commemorates the 50th Anniversary of the RCDC and is dedicated to all those who have served in the Corps. It was erected by WO 2 Morris WD.



Brigadier E.M. Wansbrough

OBE, MM, ED, CD, QHDS, DDS, FICD, FACD

Colonel Commandant of the

Royal Canadian Dental Corps



Since being honoured by the appointment of Colonel Commandant of the Royal Canadian Dental Corps two years ago, I have been asked from time to time, - "What are the duties of the office?". To answer I cannot do better then quote from Canadian Army Order 20-28, 31 August 1964.

"The tenure of appointment of Colonel Commandant will be for a period of five years. Officers appointed from the Retired List will be enrolled in the Supplementary Reserve for the tenure of their appointment."

Terms of References

It will be the duty of the Colonel Commandant to:

- a. foster esprit de corps throughout the corps;
- b. advise Army Headquarters as appropriate in his capacity as Colonel Commandant;
- c. act in an advisory capacity to the corps association and unit commanders of the corps on matters pertaining to the corps so that uniformity is maintained in such matters as dress and customs;
- d. advise on the administration and disposition of corps funds and property;
- e. advise on corps charities, organizations and memorials;
- f. maintain close liaison between the Regular and Militia units of the corps;
- g. keep in touch with allied corps.

The disbandment of RCDC(M) units has created a very difficult situation with regard to fostering esprit de corps and maintaining close liaison between Regular and Militia elements. There is little opportunity for keeping in touch with civilian members of the Dental profession who are interested in the Corps or could be encouraged to do so. There are at the present time 78 officer vacancies on the established strength of the RCDC(M). The RCDC Association has been ably fulfilling its role, but unless conditions change radically its efforts will have a constantly diminishing effect.

It would therefore appear that the responsibility of maintaining interest and activity in military dentistry rests on individual effort. As my contribution I submit the following:

1. The organization and promotion of a Corps reunion for all ranks in the near future;
2. The provision of a suitable and adequate memorial for all members of the Dental Corps who lost their lives during periods of warfare.

To one and all I hope that this Centennial Year will be the best ever.

Sincerely yours,

Elgin M. Wansbrough

Corps Conference

The 17th Annual DGDS Study Period and Conference was held in Ottawa 20-23 Nov 66 with Dental Unit Commanding Officers from across Canada, and from Europe attending. This year, for the first time, dental staff officers from Training and Mobile Commands were also in attendance. The meetings, which covered a wide range of topics of particular interest to the Corps, were chaired by Col LG Craigie.



Seated L to R - Col LG Craigie, Brig KM Baird, Brig GH Spencer (DGTR), Brig EF Kearney.

Standing L to R - Maj JW Fletcher, Maj JVR Chatwin, Col GC Evans, Col JW Turner (partially hidden), Maj LA Reynolds, Lt-Col WH Harrington, Lt-Col LA Pierce, Col GR Covey, Lt-Col AW Brusso, Col RHG Cunningham, Col CM Cornish, Col SG Bagnall, Lt-Col WR Thompson, Lt-Col JC Brick, Lt-Col VW Anglin (partially hidden), Lt-Col G MacDougall, Maj CA Casterton, Maj FH Guevremont, Lt-Col LA Richardson, Lt-Col DH Frotheroe, Capt E Clark.

A formal dinner was held at CFB Uplands on the evening of 23 Nov as a social function for the Conference and to bid farewell to Brig KM Baird, retiring DGDS. A portrait of the Brigadier, to be hung in the RCDC School, was presented on behalf of the Corps by the Colonel Commandant, Brig EM Wansbrough (Retd). Other suitable mementos were presented to Brig Baird and a bouquet to Mrs Baird. In his farewell speech, the retiring DGDS spoke of his long and happy association with the RCDC during both peace and war-time service.

Brig Kearney conveys best wishes
on behalf of the Corps to
Brig Baird on his retirement.



Annual Corps Association Meeting

Brig EF Kearney and Lt-Col G MacDougall attended the annual meeting of the Royal Canadian Dental Corps Association held in Ottawa 9-10 Dec 66. At this meeting

the following slate of officers was elected:

Past President	- Lt-Col MJ Snidal, Winnipeg, Manitoba
President	- Lt-Col AJ Harris, London, Ontario
President-Elect	- Lt-Col JE Hallett, Halifax, Nova Scotia
1st Vice-President	- Lt-Col SG Geldart, Edmonton, Alberta
2nd Vice-President	- Lt-Col JMR Gourdeau, Montreal, Quebec
Secretary	- Lt-Col MC Harks, St Catharines, Ontario
Treasurer	- Lt-Col TW LeSage, Ottawa, Ontario

Recruit Dental Index to be Established

Recruits entering the Canadian Forces are being dentally examined at the six Personnel Selection Units across Canada in order to determine a dental index for young Canadian males within this age group. Maj JVP Chatwin is currently visiting the PSUs in order to ensure standard procedures in conducting dental index examinations.

RCDC Curling

The Fifth Annual RCDC Bonspiel will be held at CFB Borden 17-18 Feb 67.

The Bonspiel will be conducted on a Three-Event system with the first draw at 0800 hrs 17 Feb. Details concerning the draw will be contained in the instruction booklet which is issued on arrival.

Curling brooms will be available without charge; however, it is recommended that if possible personnel bring their own brooms.

The Presentation Dinner will be held on Saturday evening 18 Feb.

Division News

New Director General of Dental Services

Brig B Kearney, MBE, CD, QHDS, F, DDS, FICD

On 9 Dec 66 Col B Kearney was promoted Brigadier and appointed Director General of Dental Services, replacing Brig KM Baird who retired from the Armed Forces. Brig Kearney is heartily congratulated and wished every success by all members of the Corps, and to Brig Baird go wishes for happiness in his retirement and future endeavours.



Division Officer Promoted

Lt-Col JW Turner has been promoted to the rank of Colonel and appointed Senior Consultant for the RCDC replacing Col LG Craigie who is now Deputy Director General.

Dental Health Meeting

Maj JVP Chatwin as DFHO representing DGDS, attended a meeting of the Subcommittee on Statistics and Evaluation to the Advisory Committee in Dental Health of the CDA, held in Ottawa in October. The Corps will make available to this Committee results of the recruit survey presently being conducted by RCDC teams.

Special Events

RCDC officers of the Ottawa area were hosts for the annual Christmas party held on 16 Dec 66 at the Senior NCOs Mess, HMCS Carleton. Lt-Col LR Pierce organized this successful party and it was attended by members of the RCDC and civilian personnel from all clinics in the area.

11 Dent Coy

Retirements

Best wishes are extended to Dr FM Murray who retired from the Civil Service on 10 Nov 66. Since his retirement from the RCDC in 1958, Dr Murray has served in the clinic at CFB Esquimalt.

Sports

"A team of braggarts consisting of Maj Sivell, Capt Stansfield, Lt Savoie and Sgt Shergold were soundly trounced by Col Evans, Lt-Col Hillier, WO1 Bilbey and WO2 McHugh at the start of the Recreation Curling Season."

The First Annual Christmas Bonspiel was held in Edmonton on 16 Dec 66 with one team from Calgary, two from Cold Lake and three from Edmonton taking part. It was won by a rink from Cold Lake with Capt Chernesky (skip), Capt Budzinski (third) and with Capt Wilson and SSgt McFadden holding up the front end'. An excellent meal, speeches and the presentation of trophies followed the curling. Approximately 40 RCDC personnel attended this one-day spiel and all were in favour of making it an annual event. The CC kept a keen eye on prospective curlers for the forthcoming RCDC Bonspiel, and all Dental Units are to take fair warning that a strong representation will come out of the West this year.

12 Dent Coy

Retirement

Sgt Fleisher DLG is retiring from the RCDC after nearly 22 years service. During World War II he saw service in UK, France and Germany; and later, in Korea, he was one of the few RCDC personnel to be awarded the United States Distinguished Unit Citation. Most of the members of this unit in the Halifax area were present on 18 Nov to bid him farewell and to witness suitable presentations.

Sports

The following RCDC members who took part in the Halifax Garrison Curling Club Turkey Bonspiel were prize winners: SSgt MacFarlane AJA, WO2 Everett EMB, Capt EF Foley and Capt M Kostyniuk.

Major RH Headley won a turkey at the Gagetown Turkeyspiel.

WO1 Shiner JE won a turkey at the Annual Cornwallis Turkey Shoot.

The writer of No 12 Coy news has aptly stated--"the dentals were really 'for the birds' this season."

Special Events

A very successful unit Christmas party, in the form of a supper dance, was held at Windsor Park on 16 Dec. This was the first one held for some time and was very well attended. All clinics except Chatham and Summerside were represented, with almost all of the staff from Cornwallis in attendance. The committee secured a band and prizes, all of which added to the festive atmosphere.

13 Dent Coy

Retirement

SSgt "Frank" Heard upon reaching retirement age after serving with the Armed Forces from NPAM Service in 1933 and Active Service 1940, was released from the Regular Forces on 20 Nov 66. He has accepted a call-out from the Supplementary Reserve and will continue to be employed at CFB Trenton.

14 Dent Coy

Special Events

A unit Christmas party was held on 3 Dec 66 at the Charleswood Motel where a cocktail hour, dinner and dancing were enjoyed by all who attended.

A Royal Canadian Dental Corps stained glass window was presented to the Protestant Chapel, Selkirk Lines, CFB Winnipeg, by Protestant personnel of No 14 Dent Coy. It was dedicated at the morning service of worship on 18 Dec by the Chaplain, Maj EV Porrior.

Sports

The hunting season in Shilo saw Maj Collier and Capt Harach each get a deer - the former by marksmanship and the latter by sheer luck. (so says the writer from No 14 Coy)

15 Dent Coy

Special Events

A formal mixed dinner was held at the Officers' Mess, CFB Montreal, on 10 Nov 66 for Majors Durand and Masse on the occasion of their retirement. The retiring officers were presented with RCDC plaques and the ladies with bouquets.

Col Cornish (centre)
presenting RCDC plaques
to Major Jacques
Durand (l) and Major
Lucien Masse (r)



Brief biographical sketches of the retiring officers were presented in the Oct 66 issue of the Quarterly.

Christmas Party

The officers of No 15 Dent Coy were the hosts at a mixed Christmas Party for members of the Company in the Montreal area. This gala event was held at the Social Centre, CFB St Hubert, on 12 Dec 66.

RCDC School

Training

Dental Technician Laboratory Gp 1 Course



Front row L to R - Sgt J Hossdorf, WO1 DD Robertson, Lt-Col DH Protheroe, Col GR Covey, Maj FS Sills, WO2 EB Morse, Sgt KS Rothwell

Back row L to R - Cpls NJ Hope, RC Wormington, ML Allen, NB Sharp, HKK Gapmann, JA Larouche, RE Todd, WD Buxton, HE Ayerst, AF Abfalter.

Training Assistance

On 13 Oct 66, Dr DG Gardner, Associate Professor of Oral Pathology at the University of Western Ontario presented lectures to the Capt to Maj candidates. The class and staff welcomed another point of view and approach to Pathology.

Inspections and Visits

On 30 Nov, AVM RC Stovel, Commander TC, visited the School to be briefed on training activities. During his visit he gave an informal talk to all Comdts and COs of Schools and Units in Borden on the progress of unification.

Personnel

Maj AG Taylor reported for duty on 11 Oct and is employed in the Training Wing in the Fixed Partial Denture department.

Sports

Sgt RS Walker was a member of the Borden soccer team which won the zone play-offs at Kingston but unfortunately lost to the HMCS Naden team in the semi-finals of the Pearkes Trophy at Winnipeg (11-15 Oct).

Lt-Col Protheroe's rink reached the semi-finals in A Division of the Yuletide Bonspiel held at Borden.

WO2 Mazerall EE was vice-skip of a CFB Borden rink which won the trophy at the Barrie Chamber of Commerce Bonspiel 16 Nov 66.

Plans for the Fifth Annual RCDC Bonspiel are now firm and Lt-Col Sills, the Chairman of the Committee, has sent out the "flyer" to all Dental Units.

Special Events

The traditional Christmas Dinner, at which the officers and senior NCOs serve the men, was not held this year. In lieu, the officers of the RCDC(S) hosted a Christmas party for all ranks at the School on 21 Dec. The door prize was won by Sgt Joe Hossdorf.

Cpls Todd RE and Ayerst HE, candidates on the Dental Laboratory Assistant Course, won the trophy for the euchre tournament during the O'Keefe's Night held at the Huron Club CFB Borden 1 Nov 66.

Commissioned from the Ranks

All ranks were delighted to learn of WO1 DD Robertson's promotion to Capt on 17 Oct 66. He enlisted in the Canadian Army in 1940, serving with the Dental Corps from that time. As a laboratory technician, he has seen a generation of dental officers come and go. After a brief sojourn on "civvy street" following the War, he re-enlisted in 1947. Congratulations Robbie!



1 Dent Det

First Aid Training Put to Use

On 13 Oct 66 Sgt Innis RB helped to control bleeding from head and facial injuries until the ambulance arrived for a woman who was struck by a car.

Sports

Sgt Parker WJ is a playing member of the CPHQ Team in the National Defence Hockey League. At CFB Rockcliffe he has been selected as referee-in-chief for the inter-section hockey league.

Special Events

An all ranks informal dance and buffet was held at the Community Centre, CFB Uplands, on 21 Dec 66.

1 Dent Eqpt Dep

Special Events

Maj & Mrs Fletcher had the pleasure of attending a Retreat Ceremony performed by 2 Bn Canadian Guards in celebration of their 13th Regimental Birthday.

A very enjoyable Christmas party complete with Santa Bob Mills was held at the Depot for the children on 17 Dec. The parents got together with personnel of 3 Dental Clinic for a very successful "adult" party on 14 Dec.

35 Fd Dent Unit

Conferences

Lt-Col Brick attended the Western Germany Armed Forces Dental Society Meeting in Ramstein on 14 Oct. Col JD Louis, Chief of Oral Surgery at the USAF Hospital in Wiesbaden spoke on "X-Rays - Facts and Fallacies".

Special Events

One of the social events of the festive season was the Medical/Dental Christmas Party held 15 Dec. The "powers that be" decided that would be an ideal evening to call a "Snowball" (practice alert). Thoughtfully, however, the alert was of short duration, so the party continued to the enjoyment of all.

Sports

This unit's entry in the HQ 1 Air Div Mixed Bowling League is leading the league at the season's halfway mark, thus ensuring the team a berth in the play-offs at the end of the season.

Maj Y Kamachi spent Christmas skiing in the Vosges Mountains. He reported good skiing and returned with all limbs intact. Unfortunately the same cannot be said for FS Torrens CMB who broke an ankle while skiing in Austria.

4 Fd Dent Coy

Conferences

Professional meetings were sponsored by 4 Fd Dent Coy on 5 Oct 66, 9 Nov 66 and 7 Dec 66, with varied programs consisting of professional films and presentations by Lt-Col Richardson and Capt O'Hara. US Army, RADC and RAF officers attend and participate in the programs.

The NCO Study Group met on the same dates and were addressed by WO2 Bennett, Sgt Lambert and SSgt Dion.

Special Events

On 2 Dec 66 4 Fd Dent Coy held its annual Christmas party in the Castor Club in Werl. The executive of the NCO Study Group made the arrangements for this excellent party.

The officers of this Unit sponsored a Medical - Dental Ball in the Canadian Officers' Club in Soest, on 9 Dec 66.

Sports

SSgt Tait was vice-skip on the rink that won "A" Event of the Fort York Yuletide Bonspiel. He credits his win to the physical fitness program conducted recently for all ranks of this unit.

CCUNCYP

Personnel

Capt G Nye turned over the Dent Det CCUNCYP to Capt J Strom in Oct 66. Cpl O'Dell was replaced by Cpl Timmers.

Excerpts from the Nov Liaison Letter

"After two weeks of heavy rainfall the parched brown earth of the Messoria Plain blossomed into a Spring-time garden. This induced us to plant one of our own, and the clinic area is blooming with poinsettias, geraniums and chrysanthemums under the able 'green thumb' of Cpl Timmers."

"A most interesting tour of a few of the operational outpost areas was provided

by Tjiklos Company for the clinic staff. After visiting two specific outposts - "Mountainside" and "The Saddle", we were taken to the very beautiful and historic St Hilarion Castle (still held by the Turks), and on a tour through it by the Turkish Contingent stationed there. A perfect way to end a most memorable day."

Sports

Capt Strom qualified as a 3rd class diver in the RCR Scuba Diving Course. A very successful day of spearfishing climaxed the course, and Cpl Timmers has decided to enrol in the next one.

Special Events

A Christmas Carol Service was held in the UNFICYP HQ Chapel for all contingents. Each contingent sang its own country's carols and 'Silent Night' was sung by all contingents in their various languages. It was a most beautiful and impressive service.

The UN Helicopter Sqn took Cpl Black for a familiarization flight about the Island. He was impressed both with the scenery and the skill with which the aircraft was handled. The rest of the clinic staff is anxiously awaiting their turn.

CBU (UNEF)

Visits

His Excellency, Mr JR Maybee, Canadian Ambassador to Lebanon, accompanied by Mrs Maybee, visited UNEF 23-28 Oct 66. They visited this detachment and met the members of the staff.

Special Events

A farewell party was held 4 Nov 66 on the patio outside the Detachment quarters for SSgt Jim Kay. Refreshments and a fine steak and chicken dinner were served, followed by a sing-song.

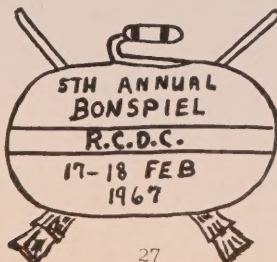
Sports

The "Canadian Open" Golf Tournament was held at the Bedouin Golf Club (Rafah) on 16 Oct 66. Maj Bisailon took 1st Low Gross with a score of 71.

Cpl Hall was runner-up for the Bedouin Golf Club Championship held on 6 Dec 66, no mean feat since he really only took up golf after his arrival in the Middle East.

Polar Bear Club

Approximately 200 personnel of the Canadian Contingent 'braved' the time of year and took a dip in the 'Med' to qualify for entry into the Polar Bear Club. Among those qualifying on 31 Dec was LSgt Eady.



Professional Training

Royal College of Surgeons, London, England

Majors JF Begin, IW Susser - Basic Dental Science Course - 31 Oct 66 - 20 Jan 67

US Naval Dental School - Bethesda, Maryland, USA

Major ED McDermott - Fixed Partial Dentures - 3 Oct-18 Nov 66

Major JLY Cyrenne - Oral Surgery - 16-20 Jan 67

Major RH Headley - Oral Surgery - 30 Jan-17 Mar 67

CFMTC - Canadian Forces Base Borden - Medical & Dental Officer NBCW Course - 9-20 Jan 67

Major JH Marion

ENT Air Force Base - Colorado Springs, Colorado, USA

Major CJ Sivell - Cogswell Oral Surgery - 16-27 Jan 67

University of Michigan - Ann Arbor, Michigan, USA

Capt NH Andrews - Endodontics - 28 Nov-9 Dec 66

Maj HW Brogan - Interceptive Orthodontics - 30 Jan-3 Feb 67

Canadian Forces Base Borden - Unit Officers Security Course - 30 Nov-14 Dec 66

Captain RG Peebles

Canadian Forces Base Clinton - Behaviour Analysis Course - 28 Nov-9 Dec 66

Lt-Col AG Andrews, WO1 TL Batten

Training

RCDC School - Canadian Forces Base Borden

Dental Laboratory Technician Course - 16 Jan-10 Mar 67

Sgts Roberts HW, Roy JRR, Schuh A, Cpls Mandruisiak ON, O'Mara TR

Dental Clinical Supervisor - 9 Jan-5 May 67

WO2 Abernathy EK & WO2 Robertson SNE

Dental Technician Laboratory Course - 29 Aug-16 Dec 66

Cpls Abfalter RF, Allen ML, Ayerst NE, Bristow GB, Buxton WD, Gapmann HKK, Hope NJF, Larouche JA, Sharp NB, Todd RE

Dental Assistant Course - 24 Oct-9 Dec 66

Ptes Arbour JMM, Bernier JG, Boissonneault JMM, Brophy GL, Burt GR, Craig MJ, Gallagher GJ, Hurley AD, Lamontagne GRR, North RC, Paquet Y; Cpls Butson JF, Clifton HB, Duffield RG, McKenzie JN, Mullin RW, Solomon RL, Taylor TH

No 1 Dent Enpt Dep - Canadian Forces Base Petawawa

Dental Enpt Maint Tech - 12 Sep-16 Dec 66

Cpls Cliche JFGA, Clint JA, Palmer WG, Schultz EJ

Conversion Course - DET Gp 1 to DEMA Gp 2 - 14 Nov-9 Dec 66

Cpls Boulianne JAL, Gratton JRY, Harkin PE, Violette JL

Special Conversion Course Dent Stmn Gp 3 to DEM Trade - 9 Jan-31 Mar 67

SSgt Sullivan TW, Sgts Kennedy JF, McDonald RW, Parker WJ

RCAC School - Canadian Forces Base Borden - Jr NCO Course - 31 Oct-19 Dec 66

Cpls Boulanger JFGP, Labrosse JGJ; lte Beauchamp CJN

R 22E R Regt Depot La Citadelle - Jr NCO Course - 25 Jan-15 Mar 67

Ptes Boissonneault JMM, Cloutier JRA, Paquet Y

RCASC School - Canadian Forces Base Borden - Sr NCO Course - 19 Sep-18 Nov 66

Sgts Arsenault JB, Brighty RG, Cable N, Fathers GN, Forsythe CVS, Fraser DE, Giroux JF, Hannay B, Hughes DC, MacLean JM, Reverill LG, Pink A, Pion LN, Roy R, Rutledge RJ

Welcome to the Corps

ites - Chenail BJ, Coss FR, Desgroseilliers JRAR, Jones NG, Lambert LA, Williams MGE, Kayne JE, Hurding WA, Michaels MJC.
Cpls - Mackie BL, Reil GJA, Heintz A, Hughes JG, Hildebrant GG, Proud IG, Longford MD, Mason DW

Promotions

To Brig - BF Kearney

To Col - JW Turner

To Lt-Col - PS Sills

To Capt - WQ1 Robertson DD

To WQ2 - Laurence KE

To SSgt - Tait A, Adams CH

To Sgt - MacLean JM, Arsenault JB, Hannay B, Fathers GM, Feverill LJ, Giroux JF, Cable N, Lambert JFA, Pion LH, Fraser DE, Rutledge RJ, Roy R, Forsythe CVS, Pink A, Eady NAJ, Vandervaart B, Wylie WL

To Cpl - Delmage RK, Strasdin JA, Abfalter RF, Hatcher LR, Palmer WG, Bosch F, Bristow GB, Hope NJ, Allen ML, O'Dell RG, Kukurudziak TRJ, Gapmann HKK, Braslins IA, Wesley JA, Belanger JF, Jack A, Roy DW, Labrosse JG, Larouche JA, McIntosh WR, Kilgrain BC, Scheer RV, Walker JM, Mullin RW, Feeney DC, Renwick WH, Clint JA, Shave CC, Tallack RJ, Maelde P, Esterbrooks AL, Anderson GM, Bowser GG, Cliche JPAG, Butson JF, Solomon RL, Clifton HB, Duffield RG, Taylor TH, McKenzie JN, Timleck LJ, Likins JA, Haiplik RM, Hewitt DG, Thomson JE, Wilson AM, Hughes JG.

Retirements and Releases

Brig KM Baird, OBE, CD, QHDS, DDS, FICD; Capt MD Taylor, DDS; SSgt Heard JF, EM, CD; Sgt Flesher DLG, CD.

Vital Statistics

Marriages

Capt FGC Arpin to Miss Nicole Hugette Champaigne; Capt JA Nattress to Miss Margaret Elizabeth Phillips; Cpl Anderson GM to Miss Haruko Muyaniski; Cpl Heather CSB to Gabriela Rita Schuler.

Births

Son - Maj & Mrs L Dombowsky; Maj & Mrs RH Headley; Maj & Mrs JFA Marcil; Maj & Mrs EM Gazo; Capt & Mrs MH Harach; Capt & Mrs AF brothers; Capt & Mrs GE Furcell; Capt & Mrs JLC Giguere; Capt & Mrs JAA Boucher; Cpl & Mrs WD Horne; Cpl & Mrs GG Bowser; Cpl & Mrs CW Deveaux; Cpl & Mrs AH Feck (Adopted).

Daughter - Maj & Mrs JF Begin; Capt & Mrs JR Robertson; Capt & Mrs WH Dunnigan (Adopted); SSgt & Mrs JR Yeates; Cpl & Mrs JA Likins.

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Quarterly

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Cover Photograph

Bellapais Abbey - Cyprus

CANADIAN DENTAL DETACHMENT
(UNFICYP) CYPRUS

Captain G.R. Nye, BA, BSc, DDS



Maintaining a Tradition

As a member of the United Nations Organization, Canada has taken an active part in every UN peace-keeping operation since the Korean conflict. Hence, it was not surprising that when the crisis in Cyprus arose in late 1963, although many members of the UN were either uninterested or hesitant about becoming involved, Canada expressed willingness to play its full part in establishing an effective UN force to keep the peace.

When the Security Council adopted a resolution creating the United Nations Force in Cyprus (UNFICYP), five member governments agreed to provide contingents and ten agreed to make contributions to the voluntary fund for financing the operation. Canada was the first country to commit itself to provide troops. Seven countries now contribute military contingents to the Force - Britain, Canada, Denmark, Sweden, Finland, Ireland and Austria. In addition, the Force includes a civilian police detachment consisting of police officers sent by Australia, Austria, Denmark, New Zealand and Sweden.

Historical Background

The Island of Cyprus has had a turbulent history, having been occupied prior to the pre-Christian era by Egyptians, Phoenicians, Assyrians, Persians and Greeks. Later the Romans ruled Cyprus for several hundred years. The Arabs conquered the Island in the Seventh Century and in 1191, during the Third Crusade, King Richard I of England (The Lion Hearted) took possession of it. It came under the influence of the Republics of Genoa and Venice until it was occupied by the Turks in 1571. The Turks remained in Cyprus for three centuries and it was at least nominally a part of the Ottoman Empire until 1914 when Turkey entered into war against Britain. Cyprus was then annexed to the British Crown and it was given the status of Crown Colony.

For many years prior to World War II a movement for union with Greece (enosis) developed among the Greek Cypriots. After the War the movement became increasingly active and turbulent. The British government and the Turkish minority opposed union with Greece, the latter group favouring partition of the Island. A new constitution proposed by Britain in 1954 was rejected. A campaign of terrorism was carried out against British soldiers and civilians by the E.O.K.A. (National Organization of Cypriot Struggle), a secret military organization. Independence was obtained in 1960 and Cyprus became a republic, a member of the United Nations and a member of the British Commonwealth of Nations. Under the terms of the treaty granting independence, Britain, Greece and Turkey agreed to safe-guard the new constitution of Cyprus and to intervene, together or singly, in the event of threats of annexation or partition. Under a separate treaty Britain was granted the right to maintain troops and military installations in two Sovereign Base Areas (SBA) on the Island which were excluded from the territory of the Republic of Cyprus.

Contemporary Political Problem

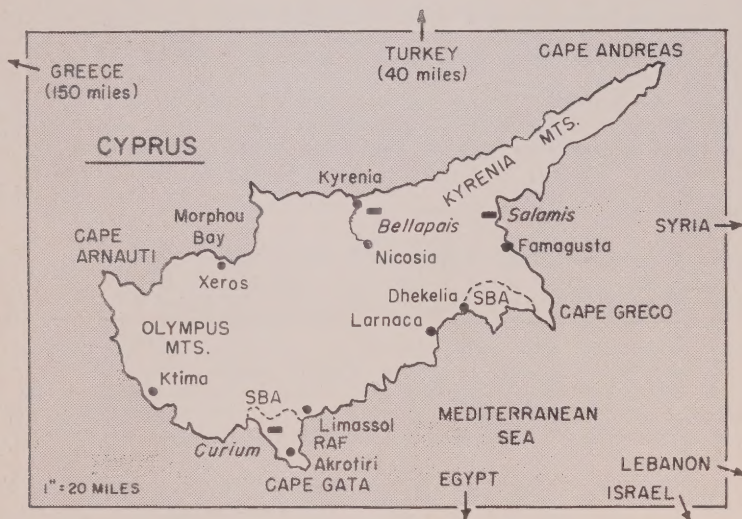
The population of Cyprus is 620,000 of whom approximately 80% are Greek Cypriots and 20% Turkish Cypriots. In general, the Greek and Turkish ethnic groups remain culturally isolated by language, religion and municipal politics. The two communities on

the Island are sharply divided and have inherited a legacy of tragic violence. By religion the Turkish Cypriots are Moslem and the Greek Cypriots are Eastern Orthodox.

Independence did not bring with it a resolution of Greek-Turkish unrest in Cyprus. Greek and Turkish Cypriots had not been consulted formally when the constitution of 1960 was drawn up and their leaders did not consider that their positions had been properly presented. The new system of government proved unsatisfactory as a means of assuring harmonious relations between the Greek-Cypriot and Turkish Cypriot communities.

The Emergency

In late 1963, President Archbishop Makarios tendered 13 proposals to amend the constitution. The main points were: unification of state, government, and municipal councils; centralization of taxation; and abolition of the Turkish Cypriots' veto privileges. The Vice-President Dr Fazil Kutchuk, leader of the Turkish Cypriot minority, rejected these proposals. Relations progressively deteriorated and on 21 Dec 63 civil war broke out. British troops from the Sovereign Base Areas stopped the fighting after seven days, but it became evident that in order to continue the truce a much larger force would be required.



This civil war was not only regrettable in itself, but also constituted a threat to international peace, since both Greece and Turkey would, if the situation had been allowed to deteriorate, have felt it increasingly necessary to intervene unilaterally on behalf of one or other of the two communities. This would have carried a serious risk that more general hostilities might break out in the Eastern Mediterranean. It was for this reason that the Cyprus problem was brought before the Security Council of UN. Further complicating the situation, both Greece and Turkey were members of NATO. On 4 Mar 64 the Security Council adopted a resolution creating the United Nations Force in Cyprus setting forth the terms of its mandate as follows: "In the interest of preserving international peace and security, to use its best efforts to prevent a recurrence of fighting and, as necessary, to contribute to the maintenance and restoration of law and order and a return to normal conditions."

Canadian Participation

The Canadian Government responded promptly and was deeply concerned about the delays which occurred even after the Security Council had adopted the resolution

calling for the establishment of the force. Canada was able to respond quickly to the Secretary-General's request because she had maintained on stand-by duty a battalion for possible service under the UN, specially trained for peace-keeping duties. The first Canadian Contingent left for Cyprus on 13 Mar 64 and consisted of the 1st Battalion Royal 22nd Regiment with a Reconnaissance Squadron of the Royal Canadian Dragoons.

A dental processing team at Camp Valcartier worked overtime to provide last-minute treatment and documentation for the stand-by battalion. On 19 Mar 64 the RCDC Detachment consisting of Capt JML Rochefort, Sgt Crockett MD and Cpl Giroux JE departed for Cyprus.

Since March 1964, the Canadian Contingent has been responsible for control of the Kyrenia district in the north central sector of the Island, an area of about 550 square miles. The tasks of the Canadian Contingent have included patrolling, reconnaissance, maintaining outposts, supplying the Force reserve, and providing a twice-daily convoy for Greek Cypriots through the Turkish Cypriot enclave from Nicosia to the Fort of Kyrenia.

UN CLIFFSIDE OUTPOST

in the KYRENIA PASS

manned by Canadian

troops of UNFICYP



Troodos Camp

The Canadian administrative support group set up a supply base in an area two and one half miles west of Nicosia which became known as Troodos Camp. Most of the personnel were quartered under canvas which had been hastily obtained from the British.

A hut formerly occupied by a Cypriot trader became the Canadian dental clinic. It can be well imagined that it required several changes and modifications before it could become functional. The building was thoroughly cleaned and disinfected. Approval was granted for the installation of a wash basin and a stepdown transformer (220V to 110V). Sgt Crockett built a cabinet and shelves and paint was scrounged to make the building more presentable. Bulk supplies were off-loaded from the Bonaventure at Famagusta and on 13 April the clinic, complete with x-ray machine, was officially opened.

RCDC Clinic

Troodos Camp

Cyprus 1964



For a period of a month after the Force arrived in Cyprus, members of the Finnish Battalion were treated in the RCDC clinic. When the Austrian field hospital and dental clinic became operational the health service for the Finnish contingent became its responsibility.

The Island is constantly swept by winds which have a clear throughway across the Messaoria Plain. The Plain is bounded on the North by the Kyrenia Range and on the South by the larger Troodos Range. The rivers do not flow throughout the year, being dry during the summer and torrential in winter. The temperature usually hovers around 95°F during the summer. With little whirlwinds darting across the Camp area daily and the occasional dust storm which might last for several hours, the clinic was constantly dusty. During the summer, tropical routine was instituted with working hours from 0700 to 1300.

In October 1964 the first rotation took place with Capt RM MacDonald and Cpls O'Mara TR and Rutledge RJ as members of the new detachment. By this time the UNFICYP operation had ceased to be an emergency action and had become a prolonged, tedious, policing task. Consequently, more permanent equipment for the static clinic was requested. The clinic staff were particularly indebted to WO2 Ferguson of the RCENE detachment who used an electrical pump to provide a rudimentary evacuation system. During November the following equipment was installed: an SS White airtor, air compressor, Kerr electrotorque, mobile engine and lab equipment.



(1 to r) Sgt Shields JAR

Cpl Hughes DC and Capt

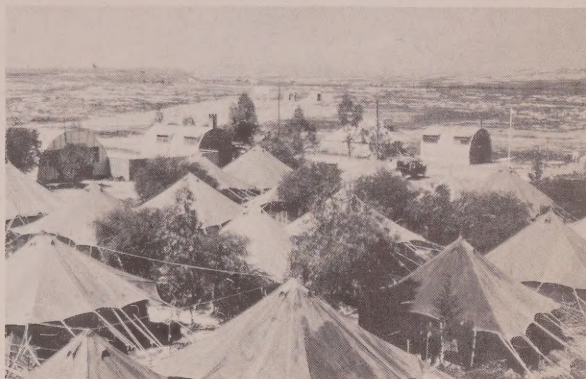
PS Wade in Cyprus

From the beginning, Canadian participation was a tri-service effort, with HMCS Bonaventure transporting bulk base supplies and the weekly maintenance and mail run being provided by RCAF Yukon Service.

On 25 Mar 65 Capt PS Wade took charge of the clinic and a week later was joined by Sgt Shields JAR and Cpl Hughes DC. When they arrived the weather was moderate but after a few weeks the heat, particularly in the clinic, became unbearable. In the lab the temperature soared to 120°F. A request for an air conditioner was not received favourably. However the Commander agreed to inspect the clinic on 18 June. Legend has it that the temperature in the clinic stood at 135°F that morning, as the clinic staff used every conceivable method to make it reach that point. The air conditioner was installed on 25 June. Succeeding dental personnel and patients alike have been grateful for the effort and persistence used to achieve the aim.

CAMP TROODOS

1964



In July that year facilities were further augmented with the arrival of an operating chair, a vacudent, and the installation of a cuspidor.

Capt H Griesbach replaced Capt Wade as OIC in September 1965. On October 9 the RAF at Nicosia, with whom Sgt Shields had established a personal liaison, learned of his impending departure and sent an informal committee to make sure he got aboard the aircraft. They were successful and as he left Cpls Forward RJ and Mandrusiak OW arrived.

Camp Maple Leaf

After a year and a half under weather-beaten canvas which had been set up temporarily in March 64, the administrative support group moved into more permanent quarters. This was facilitated by the take-over of the adjacent Camps Ubique and Elizabeth. The consolidated camp complex became known as Camp Maple Leaf.

It is doubtful if the tents would have lasted through another rainy season. Cpls Forward and Mandrusiak shared the end room of a tin-roofed dormitory. Their quarters were occasionally flooded. The clinic always received a generous portion of rain through the roof and it was during this period that "Griesbach Bridge" was constructed over the mud puddles between the clinic and the dental officer's hut.

In April 1966 Capt GR Nye, Cpl Pink A and Cpl O'Dell RG experienced the challenge of Cypriot drivers as they proceeded on the left hand side of the road to Camp Maple Leaf. The handover period was a brief five minutes. However, Capt Griesbach left Capt Nye a unique handpiece called the "puppy pounder". Puppy pounders are elaborate sticks carried by new comers to Cyprus on their evening walks to ward off wild dogs, which are seldom seen! Most of the stray dogs are infected with Hyatid Cyst disease. Canadian drivers always carry their "puppy pounders".



CAMP MAPLE LEAF - NOVEMBER 1965

Dental officer's "houchie" in the foreground

During the next few months the clinic was improved by painting, screening and the installation of fluorescent lights. A trap awning was erected over the waiting room area outside the clinic to protect the patients from direct sunlight. Arrival of the Encore field dental Unit greatly facilitated an increased range and ease in rendering dental treatment.

When Capt JO Strom replaced Capt Nye in October 1966, a handover period had been arranged so that ample time was allocated to discuss clinic facilities, policy and treatment possibilities in Cyprus. Capt Strom went on introductory tours of the British Military Hospital and the Austrian Field Hospital. Cpl Black RS and Cpl Timmers PA were the other members of the detachment with Capt Strom.

Dental Treatment

Treatment in Camp Maple Leaf was limited to what could be done with local anesthesia. Patients requiring operating room procedures were referred to the Austrian Field Hospital (AFH) and the Canadian dental officer was permitted to use their facilities. In fact the Canadians did the first dental general at AFH.

More advanced oral surgery cases involving fractures were routed through AFH to BMH Dhekelia. Pte Kayne JE was one of the patients treated by Maj Kessel RADC at DMH. No doubt this patient was suitably impressed with the treatment because he later transferred to the RCDC.

Liaison Visits and Meetings

Capt Nye and Cpl Pink visited the Dhekelia Army Dental Center. Col French, the SDO, invited them to an informal gathering of all dental personnel at the center. Cpl Pink toured the dental laboratory at BMH and had an opportunity to discuss some of the techniques used in surgical splinting by the RADC.

In December 1966 Capt Strom held an impromptu clinic at the Austrian Field Hospital in order to demonstrate the use of the new UNITEK Pin Kit. Dr. Wiesler, the Austrian dentist, reciprocated by demonstrating his endodontic technique.

Recreation and Leave

Camp Maple Leaf was a rather dismal, dry, dusty home, but the social life was the envy of the other national contingents. Among other diversions in the Officer's Mess, lizard races proved to be very popular during the author's tour of duty. Track officials were appointed and ingenious starting gates designed which were automated by the dynamo from a field telephone set. Occasionally too much spark was delivered and the lizards failed to leave the starting line!

The daily "rec" run left Camp Maple Leaf for the beaches near Kyrenia. For beginners scuba courses were conducted in the pool at the Dome Hotel. Upon qualification groups rented a boat and went on fishing excursions along the corals. Fish dinners were speared and on one occasion a three foot octopus provided a gourmet's delight!

On Sundays, trips with tour guides were arranged and many historic sites visited. The Temple of Zeus and the amphitheatre at Salamis near Famagusta is a favourite 2nd century Roman ruin. At the Curium Amphitheatre the production of Shakespeare's tragedy "Othello" was performed. In fact, Othello's Tower still stands in Famagusta. Near Ktima, the Stone of Rominos on the coast marks the traditional foamy birthplace of Aphrodite, the Goddess of Love and Beauty.

Several of the Detachment personnel became involved in sports. Cpl Forward played basketball for the Canadian Guards, their chief competitors being the "Dhekelia All-Stars". Capt Strom joined the UN Headquarters rugby team which was truly an international group with players from Austria, New Zealand, United Kingdom, South Africa, Ireland and Canada.

ECDC personnel have taken full advantage of the two, one week leave periods during their six month tour. Ten days were subsidized for room and board. In Cyprus, Canadian leave centers were established at Famagusta in the Troodos Mountains and at Limassol. A UN aircraft flew to Beirut Lebanon Saturday and from Beirut a subsidized tour to the Holy Land was available. Also leave can be taken in European NATO countries and Israel. Finally, arrangements can be made to tour Europe on annual leave before returning to Canada.

Conclusion

A tour of duty in Cyprus offers many opportunities for ECDC personnel, both as far as field experience is concerned and also a chance to travel in the Middle East and Europe. It is hoped that a return to "normal conditions" will occur on that troubled Island in the not too distant future and that UNFICYP's mission of peace will be blessed with success.



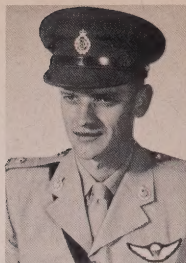
LEAVE CENTER

FLORIDA HOTEL

FAMAGUSTA - CYPRUS

MIXED DENTITION ANALYSIS

Major HW Brogan, DDS



One of the most important steps in the examination of a child's occlusion is the "Mixed Dentition Analysis" which enables prediction of the eventual amount of spacing or crowding of the permanent teeth. It is not easy to predict with accuracy the ultimate relationship of tooth size to space available, however it can be done if care is exercised and proper procedures employed.

In order to complete an analysis of the mixed dentition, three things must be known:

- a. the size of all the teeth;
- b. the perimeter of each arch; and
- c. changes in arch perimeter which will occur because of growth or treatment.

Some of the teeth can be measured directly in the mouth, but when the procedure is usually desired, the cuspids and premolars have not yet erupted and therefore the prediction of their size is a necessary step. Arch circumference may be measured by several methods but the estimate of changes in arch perimeter requires a thorough knowledge of the dynamics of the mixed dentition stage of development.

Method

Many methods of mixed dentition analysis have been suggested. The method outlined in this article is advocated for the following reasons:

- a. error is minimal and the range of possible error is known;
- b. it can be done with equal reliability by the inexperienced and the specialist;
- c. it is not time consuming;
- d. no special equipment is required;
- e. it can be done either directly in the mouth or with casts;
- f. it may be used for both arches.

The size of the teeth in an individual's mouth is usually harmonious with the possible exception of the maxillary incisors. So precise is this correlation that the measurement of a tooth or group of teeth permits forecasting within close limits other tooth sizes in the same mouth. Indeed, this is the rationale of Mixed Dentition Analysis. The mandibular incisors are the teeth of choice for measuring since they erupt early in the mixed dentition and are easily measured accurately. The maxillary incisors are not used in any of the predictive procedures since they may not harmonize with the rest of the dentition. Therefore lower incisor measurements are used to predict the size of both upper and lower posterior teeth.

Procedure for the mandibular arch

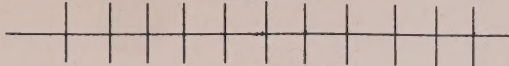
- a. With a tooth-measuring gauge or pointed Boley gauge the greatest mesio-distal width of each of the four mandibular incisors is measured and these values recorded (Plate I).

MIXED DENTITION ANALYSIS

Patient _____ Age _____ Sex _____

Date _____ Address _____ Parent _____

TOOTH SIZE



Upper

	Right	Left
Space left after alignment of 2 and 1		
Predicted size of 3 + 4 + 5		
Space left for molar adjustment		

PLATE I

Lower

	Right	Left
Space left after alignment of 2 and 1		
Predicted size of 3 + 4 + 5		
Space left for molar adjustment		

Remarks: Overjet = _____ Overbite = _____

Molar relationship = _____

b. The amount of space needed for alignment of the incisors is determined. This is accomplished as follows. The Boley gauge is set to a value equal to the sum of the widths of the left central incisor and left lateral incisor. One point of the gauge is placed at the mid-line between the central incisors and the other point is permitted to lie along the line of the dental arch on the left side. The precise point where the distal tip of the Boley gauge has touched the tooth of cast is marked. This point is where the distal surface of the lateral incisor must be when alignment has been completed. This procedure is repeated for the right side of the arch.

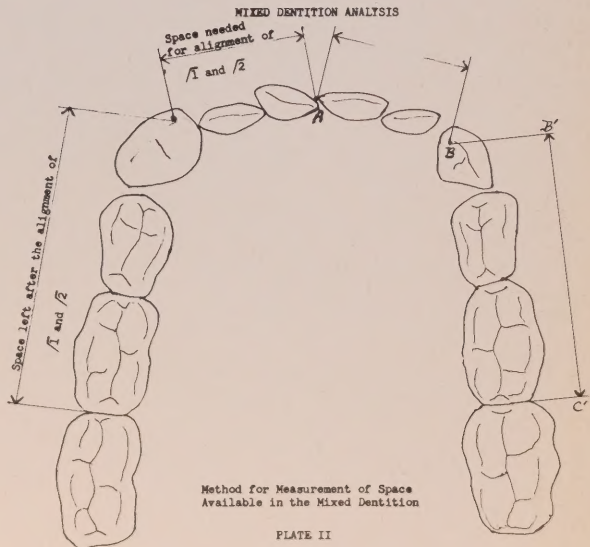


PLATE II

c. The amount of space available, after incisor alignment, is computed. To do this, the distance from the point marked in the line of the arch to the mesial surface of the first permanent molar is measured (i.e. B' ↔ C' in Plate II). This distance is the space available for the cuspid and two premolars as well as for molar adjustment

after the incisors have been aligned. This value is recorded on the mixed dentition analysis form and the procedure repeated for the other side of the arch.

d. Using the probability charts shown on Plate III the sum of the combined widths of the mandibular cuspid and premolars can be determined. Selecting at the top of the mandibular chart the value which most nearly approximates the sum of the widths of the four mandibular incisors, the column below this figure lists the range of values for the sum of all cuspid and premolar sizes. For example, it can be noted

PROBABILITY CHART FOR PREDICTING THE SUM OF THE WIDTHS OF $\overline{345}$ FROM $\overline{21/12}$

$\overline{21/12}$	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0
95%	21.6	21.8	22.1	22.4	22.7	22.9	23.2	23.5	23.8	24.0	24.3	24.6	24.9	25.1	25.4	25.7	26.0	26.2	26.5	26.7
85%	21.0	21.3	21.5	21.8	22.1	22.4	22.6	22.9	23.2	23.5	23.7	24.0	24.3	24.6	24.8	25.1	25.4	25.7	25.9	26.2
75%	20.6	20.9	21.2	21.5	21.8	22.0	22.3	22.6	22.9	23.1	23.4	23.7	24.0	24.2	24.5	24.8	25.0	25.3	25.6	25.9
65%	20.4	20.6	20.9	21.2	21.5	21.8	22.0	22.3	22.6	22.8	23.1	23.4	23.7	24.0	24.2	24.5	24.8	25.1	25.3	25.6
50%	20.0	20.3	20.6	20.8	21.1	21.4	21.7	21.9	22.2	22.5	22.8	23.0	23.3	23.6	23.9	24.1	24.4	24.7	25.0	25.3
35%	19.6	19.9	20.2	20.5	20.8	21.0	21.3	21.6	21.9	22.1	22.4	22.7	23.0	23.2	23.5	23.8	24.1	24.3	24.6	24.9
25%	19.4	19.7	19.9	20.2	20.5	20.8	21.0	21.3	21.6	21.9	22.1	22.4	22.7	23.0	23.2	23.5	23.8	24.1	24.3	24.6
15%	19.0	19.3	19.6	19.9	20.2	20.4	20.7	21.0	21.3	21.5	21.8	22.1	22.4	22.6	22.9	23.2	23.4	23.7	24.0	24.3
5%	18.5	18.8	19.0	19.3	19.6	19.9	20.1	20.4	20.7	21.0	21.2	21.5	21.8	22.1	22.3	22.6	22.9	23.2	23.4	23.7

PROBABILITY CHART FOR PREDICTING THE SUM OF THE WIDTHS OF $\overline{345}$ FROM $\overline{21/12}$

$\overline{21/12}$	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0
95%	21.1	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.5	23.8	24.1	24.4	24.7	25.0	25.3	25.6	25.8	26.1	26.4	26.7
85%	20.5	20.8	21.1	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.5	23.8	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1
75%	20.1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.8	25.1	25.4	25.7
65%	19.8	20.1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.8	25.1	25.4
50%	19.4	19.7	20.0	20.3	20.6	20.9	21.2	21.5	21.8	22.1	22.4	22.7	23.0	23.3	23.6	23.9	24.2	24.5	24.7	25.0
35%	19.0	19.3	19.6	19.9	20.2	20.5	20.8	21.1	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.5	23.8	24.0	24.3	24.6
25%	18.7	19.0	19.3	19.6	19.9	20.2	20.5	20.8	21.1	21.4	21.7	22.0	22.3	22.6	22.9	23.2	23.5	23.8	24.1	24.4
15%	18.4	18.7	19.0	19.3	19.6	19.8	20.1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4	23.7	24.0
5%	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.3	21.6	21.9	22.2	22.5	22.8	23.1	23.4

PLATE III

that when the sum of the mandibular incisor widths ($\overline{21/12}$) is 22.0 mm, 95% of the individuals with incisors of this size have cuspid and premolar tooth widths ($\overline{345}$) totalling 22.9 mm or less. No one figure can represent the precise cuspid premolar sum for all people since a range of posterior tooth widths exists even when the incisors are identical. The figure at the 75% level is generally used in making an estimate since it has been found to be the most practical from a clinical stand-point. In this instance it is 22.0 mm. Theoretically, the 50% level of probability value should be used since it is the average. Using the 50% value would distribute the error equally both ways. Clinically, however, more concern should be given to the prevention of crowding than to creating excessive spacing, hence the use of the figure at the 75% level. The value selected is the same for both sides of the arch and is recorded on the mixed dentition analysis chart.

e. The amounts of space left in the arch for molar adjustment is now computed. This is done by subtracting the estimated cuspid and premolar size values from the measured space in the arch after the alignment of the incisors. These values for each side are recorded on the analysis chart and a complete assessment of the space situation in the mandible is now possible. If it is a negative value, crowding is indicated even without molar adjustment.

Comment

When the first permanent molars are end-to-end (i.e. flush terminal plane at the

distal of the primary second molars), approximately 3.5 mm of space is required for a late mesial shift into a Class I molar relationship. This amount can only be reduced if the mandible grows anteriorly more than the maxilla. When there is already a Class I molar relationship in the mixed dentition, no additional space in the arch is needed for molar adjustment. Since it cannot be predicted during mixed dentition how the mandible will grow, the mixed dentition analysis must be based on dental adjustment factors alone; and if the molar relationship changes during the mixed dentition due to bony growth the analysis will alter accordingly.

A commonly accepted assumption is that each child will require precisely 1.7 mm of late mesial shift and that this will occur in every mouth, simply because this has been reported as the average value. Not only is such reasoning fallacious, but also dangerous. The primary purpose of the analysis is to determine the space requirements for each individual mouth. Average tooth size values cannot be assumed. As stated previously, approximately 3.5 mm of mesial shift is required when there is an end-to-end first permanent molar relationship and more is needed when the molars are already in a Class II relationship. In order to be of use clinically the mixed dentition analysis must be a custom analysis for each child's mouth.

Procedure for the Maxillary Arch

This procedure is similar to that for the mandibular arch with two exceptions:

- (1) a different probability chart is used for predicting the upper cuspid and premolar sum, and;
- (2) allowance must be made for overjet.

Value of Radiographs

It is good practice to have periapical radiographs available when doing the mixed dentition analysis since the absence of teeth and abnormal crown forms can then be noted. For example, when the mandibular premolars have two lingual cusps the crowns are larger than normal and it is wise to use a higher predictive value on the probability chart. The crown sizes of unerupted cuspids and premolars may be measured in the radiographs. This may be done to obtain supplementary information or to corroborate the mixed dentition analysis, but if used as the sole basis for the predictive procedure it is NOT accurate. The inaccuracy is unavoidable because there is no way of insuring that the central ray of the x-ray machine is lined up at exactly 90° to the unerupted teeth. The x-ray image of the teeth is usually significantly larger than their actual size.

Summary

A method for Mixed Dentition Analysis which can be executed with equal facility by both the orthodontist and the general practitioner has been described. The rationale for the method has been outlined and the importance of including this procedure in the examination of a child's occlusion emphasized.

* Maj HW Brogan attended a course in "Interceptive Orthodontics" earlier this year at University of Michigan, Ann Arbor, Michigan, USA.

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For every report casting doubt on fluoridation, there are innumerable ones concerning its safety and effectiveness. In fact, many authorities now regard fluoride as a dietary essential which not only renders the tooth less susceptible to decay but is necessary for proper development of the teeth, improving the quality and appearance of the enamel and reducing the incidence of idiopathic enamel surface defects.

- British Dental Journal - 21 Jun 66

* MOTIVATION IN THE CHOICE OF A CAREER

Lt-Col DH Hillier, CD, DDS, MPH



Introduction

Civilian employment is normally undertaken with a background and training which enables the new employee to contribute towards the workload immediately or following a brief period of familiarization. A career in the Armed Forces, on the other hand, is most frequently begun with the understanding that lengthy periods of training will be necessary before the Services can expect any worthwhile labour from the enrolee. The subsidization of dental students is in accordance with such an understanding and the Government's investment in them represents a calculated risk against their future work. A corollary risk is taken by the student who commits himself to nine years of a manner of life and endeavour about which he probably knows very little and with which he will not become fully involved until after he graduates. Despite the largely academic and civilian atmosphere in which he spends the first four years of service, the young officer will, during that time, form a lasting assessment of the virtues and shortcomings of a career in the RCDC. It is to the Corps' advantage, therefore, to provide for him as broad a military experience and to furnish as complete information as possible concerning a career as a dental officer in order that the assessment may be both knowledgeable and thoughtful.

The following comments concern those basic human needs which must be met for a satisfying career in any field and relate these needs to service in the RCDC. Although primarily directed towards young dental officers, the thoughts expressed have application to all Corps personnel.

Employment to Fit Your Needs

The choice of a man's occupation is governed largely by his family background, ability and opportunity. A career may evolve from a combination of experiences, pressures and decisions which occur over a long period and of which there may or may not be cognizance. As a result of to-day's specialization, the general pattern of a career is determined at an early age and in the professions and highly skilled trades the specific type of work must be chosen at the Secondary School level. Hence, only after one has devoted several years of study directed towards a particular field is he sufficiently mature to evaluate the field in an enlightened manner and in terms of his own needs and aspirations.

Obviously, the great expenditure of time and money required by an education in the trades or professions cannot be cast aside lightly. Normally by the time a person whose life has been directed along these lines achieves the senior undergraduate level, the only decision he can then make in regard to his career must be based on the conditions under which he will practise his profession or trade. These conditions should be chosen in terms which he believes will bring him happiness, or at least contentment, and should be based on the degree to which proffered employment of his talents and knowledge fulfil five basic needs which are common to all men.

Conditions of employment, professional or otherwise, will be satisfactory only

* This article was given as an oral presentation during the Officers' Clinical Course
13 Feb-17 Mar 65.

insofar as they fulfil what has been termed the Psychic Income, which is the total of each man's need:

1. to belong,
2. to have status,
3. to advance,
4. to exert influence and be respected, and;
5. to feel secure.

This Psychic Income - these Basic Needs, it will be noticed, do not include financial return. Money is, after all, merely a convenient method through which we can buy what is needful to live, and additional expression or fulfilment of these basic needs which tend to distinguish us as human beings.

The degree to which each of these needs must be fulfilled to achieve contentment differs with each person and, indeed, with respect to the same person at various times. For example, to one person the need to feel that he "belongs" in his working group and the opportunity for social interaction may be of paramount importance. Any position in which these opportunities are limited would be distasteful to him. He might prefer to accept a position which offered less money or chance of promotion but allowed him to be an integral part of a group. Someone else might take the completely opposite viewpoint. Furthermore, a young person is more likely to be influenced in his choice of work by the opportunity for advancement in salary and status, whereas, as he gets older the degree of security offered assumes greater importance.

Although the fulfilment of specific and immediate needs is of great importance, a proffered position should be examined in terms of future as well as immediate needs. Admittedly, an offer may be so attractive in one aspect that one would be willing to ignore all other considerations. To cite a most improbable example a college graduate might accept a job as garbage collector at \$75,000 a year. Obviously this job would fail to fulfil any of his BASIC NEEDS; these he would have to meet outside of his work and with \$75,000 he has the capacity to fulfil them. He probably would not be happy at his work but such financial rewards would provide the opportunity to create happiness every hour he is not at work.

Psychic Income need not necessarily be met in full by his profession. Indeed, it should be served as fully as possible by all experiences throughout life. A large proportion of that life is spent in the working situation, however, and during this period one should attempt to attain a high degree of satisfaction of his **Five Basic Needs**.

Five Basic Needs

1. To Belong

That man is essentially a gregarious animal and not "an island unto himself" has been recorded since Biblical times and this trait is particularly evident in his drive to be part of a group. To be associated with a team that is doing something worthwhile is of great importance and it is of even greater consequence that he be recognized as a part of that group, and not just an employee. The effectiveness of putting a fellow worker "in Coventry" and neither speaking to him nor including him in any group activity indicates the power of man's need to belong.

This need is further demonstrated by the person who will push himself into situations where he is obviously not welcome, - who will suffer countless rebuffs, only to return again, inviting further rebuffs. Such persons we deem to be "thick skinned" or speak of in even more uncomplimentary terms. Despite evidence of antagonism he is still able to associate himself with that group and, hence, he belongs. Similarly, solitary workers such as travelling salesmen associate themselves with and project a strong association with "The Company" as a substitute for active and physical association with their fellow workers.

2. Status

Everyone requires a precise status in his job and that level must be readily recognized by his co-workers and confreres. The importance of a recognized, defined and satisfying level within the work-group is exemplified by non-meaningful titles for those in positions of minor authority. Precise levels of hierarchy facilitate the exact placement of each individual within the organization and enable each member not only to recognize the stratum which he occupies but also to be assured that his exact position is known and appreciated by his fellows. Of equal importance to such vertical stratification is the lateral division between factory labour and office positions, and between the lesser white-collar jobs and the management or directorial staff.

3. Advancement

To stand still is to slide back. Hence comes man's need to advance his position. Proffered employment might involve two companies. In one, the pattern of progression may be set and inviolate, while in the other the opportunities to progress may be less certain but, through rapid expansion of the company, are potentially greater. Such a choice might arise between similar starting positions in banking and electronics. Although the risk one is willing to assume may vary, the potential to improve one's position must be present.

4. Influence and Respect

These needs involve man's drive to mould the ideas and action of others; to be well thought of by those beneath him in the structure and by those over him. The potential to exercise these needs may not be readily available in a relatively unstratified environment. In such instances a satisfactory measure of them can be obtained only if there is wholehearted and consistent backing and respect between the worker and his employers, particularly his immediate supervisor.

5. Security

To be secure within oneself is to be without fear; to be able to count on one's life continuing along the general pattern that has been established. As a person grows older this need becomes of increasing importance in that the pattern has become firm and familiar. The adventure in major changes in a way of life has less appeal and the responsibilities of a family assume great proportions. For them and for himself man resists upheaval of the familiar and set manner of his life.

Making the Choice

From the answer to these drives man derives his Psychic Income. Happiness is attained from a satisfactory amount and proportion of each, - amounts and proportions which vary with each personality. How fully are these needs met in the somewhat divergent situations of practising dentistry in the military atmosphere and as a civilian practitioner?

As career officers of the RCDG and hence members of two professions, there is an abundant fulfilment of the need to belong. Active and meaningful participation in the day-to-day clinical situation is augmented by the Mess and all the less structured involvements with the Base, the Corps and the various other facets of military life. Membership is automatic and intimate. Involvement is governed largely by the individual. He may become strongly identified with any or all of these groups or, apart from the clinic, only a nominal relationship may be attained. It is of importance, however, that membership itself involves no overt action on his part.

The civilian counterpart enjoys parallel membership with the clinical group. Indeed, as its senior member he is assured a degree of identification that is not necessarily accorded a young officer. Any intimate participation with other professional groups, however, requires overt action and is of such intermittent character that it

cannot be constituted an integral part of his life. On the other hand, by virtue of remaining in one location he is able to form a more lasting relationship with non-professional groups such as the church, fraternal orders, clubs, and with personal friends.

The status of an officer in the Dental Corps is precise and easily recognizable both by himself and all other military personnel. The high degree of stratification, both vertical and horizontal, ensures such definition. His position as a commissioned officer places him in the highest lateral division and his potential rise within this division is sufficient to obtain satisfaction in most instances.

In civilian life a dentist assumes the highest status within the clinic the moment he opens his practice. His level outside these confines is less well defined and entails a great deal of effort to establish and maintain.

Advancement within the profession, the power to influence and the attainment of respect overlap in the practice of dentistry. Through advancement in rank within the Corps the Dental Officer gains the opportunity to mould the ideas and actions of others and to gain their respect. Such advancement, although slow, is precise and normally entails added responsibilities.

The civilian practitioner, as the employer, begins at the highest level in his clinic and is able to exert influence over the entire staff and his patients. If he does so in a manner satisfactory to them and conducts himself generally in a manner which has their approval, he gains their respect. These three drives are much more difficult for him to attain among his peers and superiors within the profession. Indeed it is difficult for him to define who are his superiors. His rank and responsibilities remain constant and the influence and respect he engenders within the profession are nebulous and difficult to evaluate.

In speaking of security there is a tendency to think in financial terms. Security, as part of the Psychic Income, involves a relative absence of fear that a major disturbance will occur in one's manner of life - being assured that one can continue to work under certain circumstances and be able to foresee what will be the final outcome of his life's work.

The application of the need for security in civilian practice and a career in the RCDC is obvious. A young dental officer leaving the Corps to engage in civilian practice theoretically relinquishes the high degree of security offered in the Corps. He enters a situation wherein his only security is his own health and the fact that dentists can, if they really wish to, make a satisfactory living. The Corps provides a high degree of security within a narrow financial band. The officer who leaves relinquishes this security but exhibits his strong drive for advancement. To him the potential offered by civilian practice is of far greater importance. The gain in security for him lies in continuity of his practice and, generally, living his life in one location.

These few comments serve only to open the door on an important subject and are offered only to elicit serious consideration of the various elements which operate in this major decision. An officer of the RCDC who is reaching the end of his obligatory service should be aware of the great upheaval caused by termination of association with a life to which he has devoted a major part of his life. The decision is not an easy one but it is of prime importance to him that it not be made in a precipitous manner nor based on superficial considerations. In fulfilment of his Psychic Income he both gains and suffers loss by a decision to leave the Corps. He should endeavour to recognize these changes and make whatever decision he then feels is best for him and his family.

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The United States has worked long and hard to attain affluence, but it is now faced with one of the consequences of the easy life - the increase of dental disease.

- JADA Jan 67

Capt A.N. Swanzey, BA, DDS

The mountains of Austria and Switzerland are renowned for ski slopes which attract thousands of skiers annually. Early this year, Maj Peter Morin, Capt Gary Hill and the author, dental officers stationed in West Germany with 4 Fd Dent Coy, decided to take advantage of their proximity to these ski-meccas and travelled to Austria for a week-long ski holiday.

The area visited was the well-known ski center of St Anton am Arlberg in the Tryrolean Alps. The group was composed of 26 Canadian and American service personnel and their wives.

This was not an organized tour, but rather a casual arrangement whereby an entire Pension-Hotel was reserved just outside St Anton. Everyone provided their own transportation and made their own skiing arrangements. This plan worked out exceedingly well.

As is often the case, "getting there is half the fun". Those who arrived during daylight hours had a pleasant and relatively uneventful trip. But the "stragglers" were overtaken by snow and fog as they entered the six thousand foot Arlberg Pass. On entering the Pass, our world became two high banks of snow and a steep, winding pair of snow-filled ruts. Chains notwithstanding, it took two tries before the welcome lights of St Christoph were glimpsed, marking the descent down from the Pass to St Anton.

St Anton am Arlberg

Austria



All arrived intact, although the late-coming Morins shocked everyone when it was learned that Mrs Morin had just rallied from the mumps to make it for skiing. Fortunately, there were enough doctors and nurses in the group to handle everything from mumps to the anticipated aches, sprains and broken ankles that so often accompany skiing.

The next morning, the keen skiers were off to the slopes as early as possible, while others took advantage of the fine weather to do some sightseeing.

A well-known guide book describes this area of the Tyrol as "a pearl of mountain provinces, the best winter sports area in Austria, and one of the best skiing centers in the world". The description is not an exaggeration. In this area there are slopes to ease the way for beginners, and slopes to test the most experienced skiers. For those who like to ski from one area to another there are tows and trails

that lead from the slopes above St. Anton to St Christoph, the training area for the famous Austrian ski-school instructors. From St. Christoph, guides may take the expert skier along unbroken trails to another skiing area on "the other side of the mountain" - the Vorarlberg, and its resorts at Zurs and Lech. A bus trip will bring the traveller back to St. Christoph, and a half-hour run will return him to St Anton.

After browsing through the shops of St Anton for a while, our group ascended Valluga Mountain by cable-car. At 7000 feet the last ski run was passed, starting only 700 feet from the tip of Valluga. The view from this point is spectacular with the towering Zugspitze marking the border of Germany to the north, while to the south the Dolomite Mountains outlined the northern border of Italy. The brilliant sunshine highlighted peak after peak in a sea of mountains in all directions, a sight that was almost unworldly.

The next day ski lessons were started in earnest. Maj Morin and a few of the "pros" moved up the slopes with the more advanced classes, while most of the group remained below with the beginners. Our instructress was a dedicated, no-nonsense teacher, who didn't hesitate to use the butt-end of her ski pole on the "student" to reinforce her instructions. Screams of - "keep your hip forward", "weight on the downhill ski", and "skiing is kneeling" were reminiscent of parade square commands. For the next six days four hours a day, we struggled, slipped, rolled and sometimes managed to ski down the slopes to the accompaniment of shouts of encouragement from our teacher.

A two-hour lunch break highlighted the day. From noon until two o'clock, the group gathered at the mid-slope restaurant to relax on the sun deck, compare notes, soak up the everpresent sunshine, and to gather strength for the afternoon's assault on the slopes.

Five o'clock usually saw the lounge of our hotel slowly fill with weary skiers looking for a hot buttered rum, or the host's delicious and relaxing "glu-wein". For the enlightenment of the uninformed, this concoction consists of hot red wine mulled with spices, cloves, nutmeg, cinnamon, etc. - guaranteed to erase the strain of the day's activities and start one's evening off in a mellow mood.

Four to five hours of nearly non-stop skiing kept the lid on "après-ski activity". Early to bed and early to rise proved to be the rule. However, occasionally the group sallied forth into town for some nightlife. The highlight was the "Tiroler-Abend" (Tyrolean Night) featuring local folk dances and folk songs, complete with yodelling and zither-playing.

One evening, the three dental couples stumbled into a Carnival or "Fasching" masquerade party in one of the local hotels. Witnessing the Austrians and Germans celebrating their "Carnival time" is quite an experience. The costumes are outlandish, the fun is boisterous, and normal patterns of social behaviour give way to all sorts of hi-jinks.

The final evening saw the group gather in the main lounge of our hotel for a



Skiing at St Anton am Arlberg
(l to r) Capt Swanzey,
Maj Morin, Capt Hill

sing-song that lasted well into the night, concluding with a couple of rounds of Slivovitz, compliments of our benevolent host.

The next day we were homeward bound with no little regret, after a week of skiing in brilliant sunshine and surrounded by views ranging from spectacular to breathtaking. Aches and pains were forgotten in the afterglow and plans already afoot for a repetition of this experience next year.

The RCDC News

Fifth Annual RCDC Bonspiel

The already high esprit de corps in the RCDC was bolstered on 17-18 Feb 67 when 128 curlers from all RCDC units in Canada gathered in CFB Borden to participate in the Fifth Annual RCDC Bonspiel. Competition was keen for the three trophies offered.

A presentation dinner was held at the RCAC Sergeants' Mess after the bonspiel. 170 members of the RCDC enjoyed an excellent meal and later witnessed the presentation of trophies and prizes.

The success of an event such as this is dependent on the planning and organization that goes into it. Credit and congratulations are due this year to Lt Col Paul Sills and his committee comprised of Capt Dave Cartwright, Capt Ray Peebles, WO2 Earle Mazerall, Sgt Don Gardner and Sgt Dick Walker.

"A Event"

WO2 Jack Fraser's rink from CFB Petawawa was undefeated in the spiel and were winners of the Wansbrough Trophy.

Brig EM Wansbrough (Ret'd) presents the trophy to WO2 Fraser JA and the members of his rink (1 to r) Sgt Goodwin RJ, Cpl Whynott PD, and Capt JPA Legendre



Lt Col PS Sills, RCDC School presents prize to the rink from CFB Cornwallis skipped by Sgt Clarke - runners-up in "A Event". From l to r Sgt Clarke JE, Sgt Hill DF, WO1 Shiner JE and Sgt MacDonald JG.



"B Event"

Lt Col 'Hap' Protheroe's rink from the RCDC School successfully defended the RCDC(R) Officers' Trophy against a strong rink from CFB Petawawa skipped by Ssgt 'Red' Palmer.

Brig Kearney, DGDS, presents the trophy to the members (l to r) Maj JW Donely, Lt Col DH Protheroe (skip), Col GR Covey and Capt DD Robertson.



"C Event"

The rink from CFB Downsview skipped by Maj IA MacDonald were the winners of "C Event" for the WOs and Sr NCOs Trophy. WO1 Batten TL (l) makes the presentation to the members (l to r) Maj IA MacDonald, Capt VO Bergland, 2 Lt WJ Percival and Maj SW Muller.



Division News

Inspections and Visits

During the period 18-22 Mar 67 Brig Kearney and Lt Col Brusso visited the RCDC detachments at CCUNCYP Cyprus and CBU(UNEP) Egypt. RCDC personnel were interviewed and dental facilities inspected during this visit.

Brig Kearney and Lt Col Thompson attended the Chicago Dental Society Meeting 6-8 Feb 67.

Clinic Accommodation

A new dental clinic was opened in March 1967 in No 8 Temporary Building adjacent to the Dental Division. It will be staffed by Division officers and will be designated as No 6 Clinic within No 1 Dent Det. This new facility will help to relieve the work load at No 1 Clinic, provide an excellent opportunity for dental officers of the Division to practise their profession at least on a limited basis, and a chance to test some of the new dental supplies and equipment first hand.

Temporary Duty

Sgt Vandervaat B had the good fortune to be selected as a member of the rotation staff and spent seven weeks on duty at Dusseldorf International Airport. He was joined by his wife for two week's annual leave in Holland.

Retirements

Three Sr NCOs from No 11 Coy with long service in the Corps recently retired from the Forces.

Sgt MacDougall WD joined the Army in 1943 and has been with the Corps continuously since that time. Unfortunately, Bill has not enjoyed the best of health during recent years. It is understood that he will be retiring to the West Coast.

Sgt Gilbert WB joined the Armed Forces in 1940 and apart from two years of broken service following World War II has served with the Corps since that time. Since rejoining in 1948 he has served in Korea and with 35 FDU in France as well as in various postings across Canada. He will be living in Vancouver following his retirement from the Forces.

Sgt Dean AG, apart from a break in service for approximately two years following the War, has served in the Armed Forces since 1940. During the War he was in the RCASC and it wasn't until he rejoined that he "saw the light" and became a member of the Corps. Max has served in Korea and in the Middle East since the War and has concluded his service career on the West Coast where he will resume civilian life.

Best wishes from the Corps and in particular from members of No 11 Coy are passed on to these men in their civilian endeavours.

Sports

Personnel from No 3 and No 8 Clinics combined to form a rink that captured "B" Event in the Pacific Military Bonspiel held 8-10 Mar at Esquimalt. The rink consisted of Maj Lafard skip, Lt-Col Kettys (third), Sgt Kerr (second) and Capt Berezon (lead).

Sgt Shand, Cpl Hardy, WO1 Daw and Pte Vasek formed the rink which captured the "B" Event in the Cold Lake Base Curling Championship.

Capt WH Dunnigan and Sgt Marckwort H were entered in the Zone Two Ski Meet at Banff from 12-18 Feb 67 and later attended the Canadian Forces Ski Competition at Valcartier.

Capt Budzinski's aspirations for capturing a place on the Cold Lake team scheduled to compete in the Canadian Ski Championships were shattered when he broke his leg in the trial runs held in Jasper.

Capt HJ Amos was a member of the CFB Esquimalt Volleyball Team which represented BC Area in the Canadian Forces Play-offs held in Edmonton commencing 20 Mar 67.

Sgt Fox of No 4 Clinic was a member of the Calgary team competing in the Zone Bowling Championships rolled off in Edmonton from 21-25 Feb 67. Sgt Fox's season average is 237.

Major Quinn and Sgt Gilbert recently won the BC District Championship. - The name of the game - cribbage. In another sphere of effort, Sgt Bruce Gilbert entered the local "hall of fame" by scoring a hole-in-one on the 6th at University Golf Course in Vancouver.

Centennial Project

"No 11 Coy's Centennial Project, "Getting the Commanding Officer on Just One Winning Rink" was finally realized when the HQ rink skipped by Sgt Ken Shergold won Third Event in the Recreational Curling League Bonspiel. Ken had the CO throwing third stones. It may be another hundred years before it happens again!"

12 Dent Coy

Laboratory Refresher Training

A refresher training program conducted by rotating laboratory personnel in the Halifax area through the central casting laboratory in Stadacona was started in Jan 1967.

Duty Trips

The supply ship HMCS Cape Scott sailed for Puerto Rico on 3 Jan 67 with Capt Ivor Hamilton and Cpl Butson as the dental detachment. While there, due to the heat and humidity, personnel worked half days only.

During the weekend 20-21 Jan, Capt Hamilton accompanied by LCDR Lynch of the USN DC attended the Puerto Rico Dental Association Convention.

Capt Hamilton also visited the Government Dental Office in Montserrat B.W.I. He had an opportunity to see a clinic in a remote area where until recently no dental treatment was available and many normally accepted facilities are non-existent.

Sports

Capt JR Robertson was a member of the PEI Ski Team representing the province at the Quebec Winter Games 11-18 Feb.

Social Events

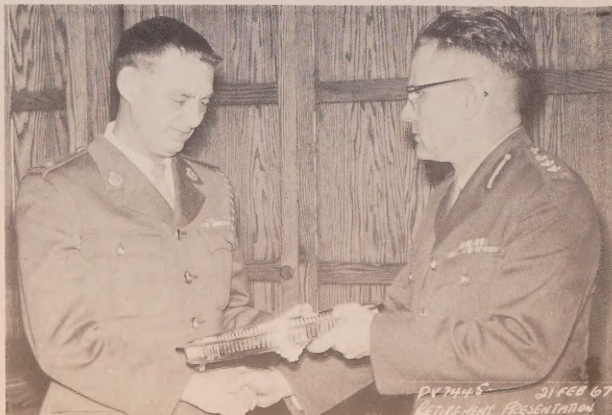
On 16 Mar all 17 DOTP undergraduates from Dalhousie were hosted for a social evening by the RCDC officers in the Halifax area at RA Park Officers' Mess. Attendance was excellent and this was a successful gathering even though the worst snow storm of the season occurred that night. That is "esprit de corps"!

13 Dent Coy

Retirement

Maj Ed Small has retired from the RCDC. After joining the Services in 1939 he transferred to the Dental Corps in 1940 and served as a dental assistant and laboratory technician until taking his release in 1945. Ed completed his education and graduated in dentistry from McGill University in 1951, re-enrolling in the RCDC at that time. Since then, besides various postings in Canada, he has served in Europe and the Middle East. During the past year Ed has spent considerable time in hospital and it is understood he is again recuperating on sick leave. He is wished a fast and complete recovery.

Col RHG Cunningham, on behalf of the personnel of No 13 Dent Coy, presents Maj Small with an engraved silver tray and extends best wishes for a happy and successful future.



Meetings and Conferences

Lt Col Anglin, Capt Cowan and Capt Steadman attended the annual two-day meeting of the Manitoba Dental Association 20-21 Jan 67. An excellent presentation on Crown and Bridge was given by Dr Henry M Tanner of Los Angeles, California. Special speakers included Mr Paul Cherniak who spoke on dental affairs as viewed by the provincial legislature; and Dr JP Coupland, President of the Canadian Dental Association, who discussed current issues of concern to the National Organization.

Special Events

Officers and Senior NCOs alike of Fort Osborne Barracks CFB Winnipeg could not but feel somewhat nostalgic with the cessation of mess activities on 31 Mar 67, the close-out date for all units in La Verendrye Lines except medical and dental facilities.

15 Dent Coy

Dental Health Week - CFB St Hubert

A stimulating Dental Public Health Program was conducted at CFB St Hubert during January 1967.

The main aims of the program were to inform the Service population of the availability of dental services and to impress upon them the advantages of positive dental health.

During the week an "Open House" was held in the clinic. This did not merely consist of turning the clinic into a "show place", but actively involved a large portion of those who attended. 860 servicemen were given dental examinations. After being shown a film on dental health they were directed to a well-planned exhibit which contained pictures, models, table clinics on laboratory procedures, and training aids depicting the services performed by the dental team. A self-serve slide projector was used and the new Encore field operating unit was on display. The exhibit is portable and it will be used on other bases.



Maj JC Roy (left) and WO2 Franzgrote HEG (dental therapist) discuss the exhibit with interested bystanders.



WO2 Fortin RG (clinical technician) awaits his turn to impress his audience with the importance of good oral hygiene.

In the DND Schools, lectures, films and home-care demonstrations as well as dental examinations for 401 children were carried out. Pamphlets and dental home-care kits were provided to Grade III classes.

Lectures were given to other groups such as air cadets and nursing sisters.

* Editor's note - Evaluation of a Dental Public Health Program is difficult. How-

ever, considering that 60% of the base personnel were examined and given oral hygiene instruction and many others favourably influenced, this program must be considered highly successful. Success is seldom achieved without effort. Every member of the clinic staff entered whole-heartedly into the program and spent many over-time hours in planning, preparing displays and generating interest by their enthusiasm. They are to be commended and it is hoped that others will follow their example.

Retirement

WO2 Cross AG is retiring from the Corps after almost 28 years of continuous service. Art was in the militia (artillery) prior to World War II and went active in 1939. While serving in Italy during the war, even though in the Dental Corps, on more than one occasion he made use of his militia training and took his turn on a gun crew ("filling the breach", one might say). Since the war, besides many postings in Canada, he has served with 35 FDU in France and aboard ship with the RCN. Recently, a retirement party was held in his honour at the CPOs' Mess, HMCS Hochelaga and the best wishes of the Corps were suitably expressed on that occasion.

Presentation

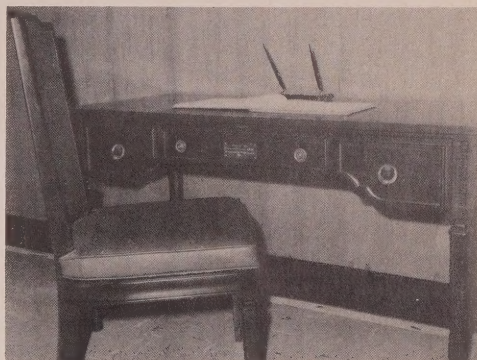
In appreciation for dental treatment received in 15 Dent Coy, Capt NE Demitre kindly donated \$250.00 for the purchase of this handsome desk and chair which is now used in the Library of the RCDC School. The inscription on the plaque reads as follows:

Presented by

Capt NE Demitre, CWAC

In appreciation for Dental Services

- 1967 -

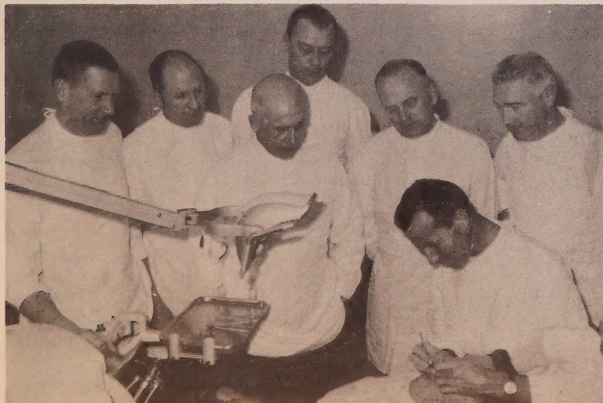


RCDC School

Training

Casualty Care and Clinical Course

Six senior officers attended the Officers' Casualty Care and Clinical Course commencing 13 Feb 67.



Left to right:
Maj DH Skinner, Maj WR
Collier, Maj TD Cobb, Maj
DJ Carmichael, Lt Col DH
Hillier, Lt Col GE Windsor
Demonstrator: Maj WH Murray

Dental Clinical Technician Course

Five Sr NCOs are attending this course. It was started on 9 Jan and will be completed on 30 Jun 67.



Front row L to R - Maj JN Wright, Lt Col DH Protheroe, Col GR Covey, Sgt HD Wagstaff
Back row L to R - Sgt RK Jones, Sgt RJ Rutledge, Sgt DE Fraser, Sgt NJ Cable, Sgt LG Feverill

Cpl LR Hatcher completed the First Aid Instructors Course at CFMTC on 17 Feb. He stood first in a class of 21 and was granted a Distinguished Pass. He is now qualified as a St John Ambulance Instructor as well as a First Aid Service Instructor.

Guest Lecturer

Both staff and candidates appreciated the opportunity to hear Dean JW Neilson lecture on Periodontal Diagnosis and Prognosis on 16 Feb.

Visits

On 31 Mar 67 Maj SW Muller and his confreres on the 1966-67 Dental Public Health Course accompanied by their instructors Dr Murray Hunt and Dr D Lewis visited the ECDC School.

Sports

The ECDC School Challenge Trophy for curling competition between the ECDC School staff and candidates on the Officers Clinical Course was won again this year by the course officers.

This trophy was donated in 1960 by the members of the Senior Officers Clinical Course: Maj TD Cobb, Maj WK Dickie, Maj EA Fell, Maj JCE MacDonald and Maj MP Quinn.

On the plus side, however, the Garth C Evans Trophy for competition between Medical and Dental Officers in Base Borden was retained by the RCDC School on 22 Mar 67.

Retirement

Ssgt VH "Bingo" Shaw is retiring from the Forces after 25 years of service. He is a well known member of the Corps and his wide range of postings since World War II has included: the North West Highway System, Korea, 35 FDU France (two tours), 4 Fd Dent Coy Germany, and CBUME Egypt. Best wishes are extended from members of the Corps on his retirement.

Commissioned from the Ranks

Lt JP Carrier is congratulated on his recent promotion from Ssgt. He joined the CA(R) in 1949 and served with the RCASC until 1952 when he transferred to the RCDC. With training in the clerk and storeman fields he has had service in 25 CFDU, 13 and 15 Dental Coys and 1 DED, as well as the Directorate. He is presently employed at the RCDC(S).

1 Dent Det

Meetings and Conferences

On 23 Jan 67 Ottawa area dental officers attended a most worthwhile and interesting series of lectures at NDAC presented by Col SN Bhaskar DDS MS PhD, Chief of Department of Dental and Oral Pathology, US Army Institute of Dental Research, Walter Reed Army Medical Centre, Washington, DC.

Retirement

Major JL Craig has retired from the RCDC but will continue his association with the Corps as a Part V Civilian operator in Ottawa. He has served in many parts of Canada since World War II and had a tour of duty with 35 Field Dental Unit in Germany. Major Craig was well known as a member of the teaching staff at the RCDC School where he served for several years as an instructor in Periodontics and also as one of the pioneer instructors for Dental Clinical Technicians.

Maj Craig (1) is shown receiving the RCDC Crest (framed) presented by Brig Kearney on behalf of all officers of the Corps at a retirement party held at the Headquarters Officers' Mess, Ottawa, 13 Apr 67.



Maj Craig was also honoured on his retirement by the ORs at a gathering held at CFB Rockcliffe on 20 Mar 67. WO2 Fediuk presented him with a pen on behalf of the NCOs of No 1 Dent Det.

1 Dent Eqpt Dep

Training

A Special Conversion Course was held from 9 Jan - 31 Mar for training in the

equipment repair functions of the Dental Equipment Maintenance Trade.



Special
Conversion
Course

(1 to r)

Ssgt Sullivan TW

Sgt Parker WJ

WO1 EC Carpenter

Ssgt McDonald HW

Sgt Kennedy JF

Sports

No 1 Dent Eqpt Dep emerged victorious in the annual curling challenge match for the 1 CMED - 1 DMD Trophy. This match creates a great deal of interest between the two units.

A rink composed of Ssgt Palmer, Cpl McKinnon, Lt Lobb and Sgt Strub won the HQ and Services Recreational Curling League Trophy. This is the third straight year a dental rink has won this trophy.

4 Fd Dent Coy

Conferences and Meetings

Dental professional meetings were held on 25 Jan 67 and 8 Mar 67 with lectures given by Capt Hill on "Oral Biopsy - An Important Aid to Early Diagnosis", Maj WK Lervy RADC on "The Effect of Soft Tissues on the Dental Arches", and Capt V Rausch on "Hypnosis in Dentistry".

On the same dates the NCO Study Group met and heard addresses by Cpl Audet on "Maintenance Phase I", Ssgt Tait on "Maintenance Phase II", Cpl Tweed on "Dental Documentation" and Sgt Christiansen on "Know Your Benefits".

Special Events

The CBC Centennial Concert Tour "Canada Entertains" visited 4 CIBG 18-22 Mar and entertained servicemen, their dependents and selected guests. All performances were well attended and the consensus was that the show was excellent.

35 Fd Dent Unit

Headquarters Re-located

Headquarters 35 Field Dental Unit moved to its new location in Menard Kaserne, Lahr, Germany on 28 Mar 67.

A flag-lowering ceremony was held at Metz on 31 Mar 67. The base was formally handed back to the military governor of Metz. The Canadian Flag was removed from

its staff as a squadron of CF 104s flew over in a final salute and a bronze plaque was unveiled to the effect that - "the RCAF was here".

Sports

The Zweibrücken clinic curling team comprised of Maj Dickie, Cpl McMillan, Cpl Pringle and skipped by Capt Weeks won the Air Division Medical Bonspiel in Feb. The Air Div Trophy will be prominently displayed in the clinic for the next year.

Maj Kamachi and Cpl Wesley were members of the winning team in the No 1 Wing volleyball league.

FS Torrens and Cpl Schmaltz while on leave at a ski resort in Austria were isolated at the resort for three days due to an avalanche.

CBU (UNEF)

Visits

Brig Kearney and Lt Col Brusso visited the Detachment on 22 Mar after having to wait out a sandstorm before flying from Beirut to El Arish. On that account their visit was cut short, much to the disappointment of all concerned.

The Canadian Ambassador to the UAR, His Excellency Mr. JK Starnes and Mrs. Starnes visited the Gaza Strip for a three-day period during March.

Special Events

On 8 Mar 67 a special church service was held to honour the late Governor General Georges Vanier and also RC service personnel deceased while in the Middle East. Maj Bisailon presented a commemorative plaque at this service.

CCUNCYP

Accommodation

During Mar 67 the Canadian Contingent Administrative Support Group moved from the battered and rusted tin huts of Troodos Camp to new quarters in the former RAF Station Nicosia. The Dent Det received the best building in camp for the new clinic. The quarters are spacious, well lighted, cool, and altogether a welcome change from those occupied previously.

Visit

Brig Kearney and Lt Col Brusso visited the Detachment during the period 18-19 Mar.

Photo taken in new clinic

Left to Right

Sgt Wilkinson
Lt Col Brusso
Capt Strom
Brig Kearney
Cpl Timmers



Professional Training

US Naval Dental School - Bethesda, Maryland, USA

Major HK Meisner - Complete Dentures - 6 -10 Feb 67

ENT Air Forces Base - Colorado Springs, Colorado, USA

Major L Dombowsky - Short Specialty Course in Dentistry - 3-14 Apr 67

University of Michigan - Ann Arbor, Michigan, USA

Major JCRR Roy - Periodontics - 27 Mar -7 Apr 67

Doctors Hospital - Toronto, Ontario

Major RJ Bryant - Oral Surgery - 6 Mar-28 Apr 67

Training

RCDC School - Canadian Forces Base Borden

Officers Casualty Care - 13-17 Feb 67

Officers Clinical - 20 Feb -17 Mar 67

Lt Cols DH Hillier, GE Windsor; Majors DH Carmichael, TD Cobb, WR Collier, DH Skinner

Dental Clinical Technician Course - 9 Jan-30 Jun 67

Sgts Cable NJ, Fraser DE, Jones RK, Peverill LG, Rutledge RJ

Dental Technician Laboratory Course - 16 Jan-10 Mar 67

Sgts Roberts HW, Roy JRR, Schuh A; Cpls Mandrusiak OW, O'Mara TR

Dental Assistant Course - 20 Mar-19 May 67

Ptes Chenail BJ, Coss PR, Desgroseilliers JRAR, Hurding WA, Jones NJ, Kayne JE, Lambert LA, Michiels MJC, Williams MGE; Cpls Alkenbrack AM, Bowser GG, Haiplik RM, Heintz A, Hewitt DG, Hildebrandt GG, Hughes JG, Likins JA, Mackie BL, Mason DW, Proud IG, Riel JAG, Thomson JE, Timleck LJ, Wilson AM

RCAC School - Canadian Forces Base Borden - Jr NCO Course 11 Jan-28 Feb 67 Jr NCO Course 8 Mar-25 Apr 67

Cpl O'Dell RG; Ptes Arbour JMM, Bowman GW, Brophy GL, Burt GR, Gallagher GJ, Hurley AD, Lamontagne GRR, Morin EAJ, Vasek JJM

RCSME School - Canadian Forces Base Chilliwack - Sr NCO Course 3 Jan-17 Feb 67

Cpl MacLean LI

Training with Industry - Ritter Equipment Company, Rochester, NY 17-28 Apr 67

WO 2 Morris WD

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Ptes - Calnen RD, Cooper TJM, Dale JE, Eden DM, Morphet DJ, Muir JA; Cpls Alkenbrack AM, Armstrong PJ; Pt V Miss D Mooney, Mrs I Pollock

Promotions

To Major - NH Andrews, CL Gullekson

To Capt - VO Bergland, RG Peebles

To Lt - JP Carrier

To WO 1 - EB Morse

To WO 2 - Hopkins RG, Matheson RF

To Ssgt - McDonald MO, Shields JAR, Strub AL

To Sgt - Dumas PJ, Shore JW, Wadden GM

Retirements and Releases

Majors JL Craig, EJC Small

Cpts LTFB Archambault, RH Crowson, N Goldberg, JA Nattress, TC Tervit

WO 2 Cross AG

Ssgts MacDougall WD, Shaw VH

Sgts Dean MG, Gilbert WB, Playford DB

Cpls Girouard A, McEwen JB

Vital Statistics

Marriages

Cpl Tweed WE to Miss Virginia Christine Gonyea; Pte Evans RV to Miss Susan Ruth Nason.

Birth

Son Major & Mrs JFA Marcil, Capt & Mrs JR Cowan, Sgt & Mrs DT Murley, Cpl & Mrs A Jack, Cpl & Mrs LI MacLean, Cpl & Mrs EJ Schultz, Cpl & Mrs JE Thomson.

Daughter Capt & Mrs JD McCallum, Sgt & Mrs JAR Shields, Sgt & Mrs DC Hughes, Cpl & Mrs JRY Gratton, Cpl & Mrs DH Hardy, Cpl & Mrs WH Renwick, Pte & Mrs MJC Michiels.

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Cover Photograph

Ships of the desert' - camel and UNEF jeep
Photo taken near Rafah Egypt (Gaza Strip) - 1959

FAREWELL TO THE DESERT

THE FINAL DAYS OF UNEF

Major NH Andrews, BSc, DDS



Background

Since the establishment of the United Nations Emergency Force in late 1956 with its RCDC Detachment under the command of Major PS Sills, an estimated one hundred RCDC personnel have served in the Sinai. To these men, the fact that the RCDC flag has been lowered in Camp Rafah for the last time will bring back fond memories understandable only to those who have served in the Middle East.

Upon his arrival, the newcomer could not help but be impressed with the evident progress that existed in the Canadian camp at Rafah. Ten years of gradual improvement had made this camp into what one was happy to call "home". The clockwork routine of a smooth-running military organization was obvious and the spirit of co-operation and quiet efficiency of the professional Canadian soldier remarkable. This was the situation as it had existed for a decade and was that way during the first week of May 1967.

Previous articles in this publication by Majors Small and Kelland have given comprehensive coverage of recent history of the Middle East and to the establishment of UNEF and its function. Suffice it to say that Canada's contribution was logistic, communications and air transport elements; in fact, every army corps was represented. However, combat troops were a minority and emphasis was on support units which were all in Camp Rafah with the exception of RC Sigs in Gaza and 115 Air Transport Unit RCAF in El Arish. The troops who performed the actual border patrols on the Armistice Demarcation Line and the International Frontier were infantry battalions from: Sweden, based on Hill 88 in Gaza; Brazil, based near the town of Rafah; India, near the town of Dier el Balah; and Yugoslavia near El Arish. With the arrival of an Indian Dental Officer in late 1966 each national contingent had its own dental facilities. The Canadians had two dental officers, the senior of whom acted as Senior Dental Staff Officer UNEF and was responsible to the Commander UNEF for treatment policy and for the procurement of dental stores for all dental detachments in UNEF.

The Build-up

During the second week of May, Egyptian military activity in the area to the west of Camp Rafah became very evident but none of our group was qualified to say that this was anything more than normal spring manoeuvres. A casual drive to El Arish revealed much equipment which appeared to be in tactical position, and, to say the least, it was a very impressive display. This was probably our first indication that anything was about to happen, and even this was dismissed as merely a show of military power.

Border incidents involving Syrian and Israeli troops had grown to proportions which had become embarrassing to Syria and she was bent upon drastic retaliatory action. The other two major members of the Arab world, Jordan and Egypt, did not appear so eager in this direction but the pressure seemed to fall upon President Nasser of Egypt. Syria claimed he was "hiding behind the skirts" of the United Nations

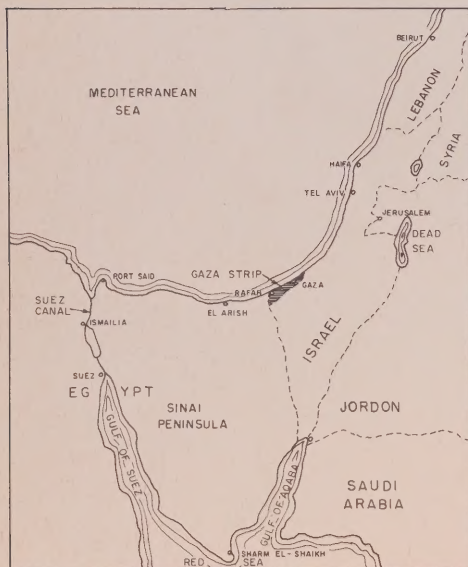
and had become complacent in his security, while Syria lost round after round to Israeli raiders on their unprotected border. This statement was derogatory to the leader of the Arab people and a blemish upon his reputation as leader. It is speculated that for this reason Nasser took the steps that he did, i.e. the blockade of the Gulf of Aqaba, massive troop movements up to the Armistice Demarcation Line and International Frontier and, ultimately, his request that UNEF be removed. It is felt that he thought that his request for the removal of UNEF would be denied. The theory is also held that Nasser did not wish to have a conflict but was pressured into this venture by the other Arab states. The results of the subsequent war seem to bear out the fact that he was not prepared for such an undertaking.

Withdrawal of UNEF

On 17 May President Nasser made representation to UNEF Commander, Maj Gen IJ Rikhye, for the removal of UNEF. Maj Gen Rikhye stated that he had no authority to grant such a request. The request was then passed to UN Secretary General U Thant in New York and the following day the order that UNEF would be withdrawn was received. A brief formal ceremony at King's Gate on the Egyptian-Israeli border at 1700 hrs on 19 May 67 saw the lowering of the last United Nations flag and signified the end of UNEF as a peace-keeping force.

The force was granted 45 days to complete its move and plans for an orderly withdrawal in this period were formulated. This plan was soon revised and scheduled to be completed within 30 days. This initial plan called for the gradual withdrawal of the infantry battalions first, with Canada having the last contingent to leave, the reason being that the Canadian Contingent held the UNEF Stores and their job was to collect all this material in Camp Rafah. Immediately, all warlike stores were recovered. These included most of the vehicles.

For all the excitement of these few days, life still went along normally in Camp Rafah even though there was a different purpose and personnel were doing extra duty shifts. There was still time for golf and swimming as had been routine for many years.



On Sun a.m. 21 May, massive troop movements from the El Arish area into the Gaza Strip took place and as Camp Rafah was on the main highway across the Sinai we were afforded a first hand look at what appeared to be the entire Egyptian Army. An estimated 80,000 soldiers and 400 tanks moved through our area in 48 hours. This became a little disconcerting to our men. A drive of 25 miles through the Gaza Strip to the city of Gaza revealed that this was considered a strategically important area as the countryside bristled with armament. It is also of note that on this same day our short wave communications were jammed as were news broadcasts from the BBC through a station in Nicosia, Cyprus.

The next day this same trip to Gaza revealed the disappearance of the Egyptian Army which had been so evident the previous day. It was assumed that they had moved down the International Frontier and had left the defence of the Armistice Demarcation Line between the Gaza Strip and Israel to the Palestinian Liberation Army, an organization comprised of Palestinian refugees who live in the Gaza Strip.

Work continued at Camp Rafah with the handling of stores. In general, Canadian stores were either prepared for shipment to our contingent in Cyprus, shipment back to Canada, or were written off. Items of Canadian dental equipment were sent back to Canada as soon as the overtaxed RCE "box factory" was able to supply the crates.

With the blockade of the Gulf of Aqaba by Egypt on 23 May tension mounted. Our travel was now restricted and we were confined to camp which, as it turned out, was to our benefit because propaganda was being disseminated in the area and nearly everybody had been supplied with arms.

On 23 May we were denied further use of the air-strip at El Arish which was intended to be our chief evacuation route. 115ATU RCAF was removed and the Egyptian Air Force moved in two squadrons of MIGs. Alternate means of evacuation were now set up. These included the dispatch of HMCS Provider from Canada, the US 6th Fleet in the Mediterranean and the possibility of airlift from Port Said by RCAF aircraft which seemed the most likely. Travel to Port Said would have been by rail, which, fortunately, never came to pass.

The Showdown

On 28 May Nasser blasted Prime Minister Pearson for his apparent support of Israel in the Gulf of Aqaba issue and declared Canadian troops in UNEF persona non grata so that, as of that date, the Canadian contingent was no longer part of UNEF and their role was undertaken by the other contingents. This, coupled with the fact that we were given 48 hours to be out of the country, turned what had been an orderly close-out into chaos. Canadian personnel worked around the clock to finish up the removal of the remaining Canadian stores and personal belongings. Four Hercules transport aircraft were made available immediately, but the job of evacuating some 700 troops and their belongings was too great a task for them within the time limit. A request for a 24 hour extension was granted and four more Hercules were dispatched from Canada for the trip to Pisa. For this purpose the use of El Arish air-strip was reinstated and road travel to El Arish from Camp Rafah was conducted under escort of the Egyptian Army. During the period 29-31 May the entire Canadian Contingent was evacuated to Pisa and then via Yukon aircraft to Trenton, Ont.

No doubt there were those who viewed the last two weeks in Egypt with mixed emotions; not that Canadian troops were unhappy to be home, but the fact remained that they had been evicted from Egyptian soil and had not completed the task which had been assigned to them for the withdrawal operation of UNEF. Notwithstanding this however, each and every member of the Contingent can be justly proud of the job done, the professionalism exhibited, and the contribution made by the Canadian Contingent which earned its recognition as the backbone of the United Nations Emergency Force.

Méthode simplifiée de préparation de la coiffe en porcelaine

Major JOL Bourget, BA, DDS



Depuis son apparition au début du siècle, la couronne jaquette ou coiffe en porcelaine n'a cessé, grâce aux découvertes de la technique moderne, de s'améliorer et de s'imposer aux exigences tant du patient que du dentiste. La recherche a augmenté la résistance des porcelaines et mis au point un instrument de grande utilité pratique et psychologique: la turbine à haute vitesse. L'expérience clinique a légué à l'omnipraticien d'aujourd'hui les critères ou commandements du succès, rendant ainsi ce service à la portée et à la satisfaction de tous. De nouveaux horizons s'ouvrent maintenant pour les cas d'occlusion difficile et de dents abîmées avec les nouveaux émaillages sur coiffe métallique.

Il va sans dire que la coiffe en porcelaine exige du dentiste plus de précision, plus d'observation et aussi plus de sens critique. L'expérience est un excellent maître, mais les circonstances empêchent très souvent son acquisition sûre et rapide. Aussi une méthode simple, éprouvée, mnémotechnique serait d'une grande utilité pour l'amateur et le débutant. La Faculté d'Art Dentaire de l'Université de Michigan à Ann Arbor, U.S.A., préconise une telle méthode et cet article a pour but de le décrire. Cette méthode comprend huit étapes:

1. Rétraction gingivale
2. Division de la surface labiale en six segments
3. Creusage d'un sillon central guide
4. Enlèvement méthodique de la surface d'émail au labial
5. Découpage du croissant incisif
6. Meulage par étapes de l'épaulement
7. Meulage de la surface linguale et du rebord incisif
8. Finition des parois, de l'épaulement, des angles et du rebord incisif

L'instrument de base est la turbine à haute vitesse. La finition générale est accomplie avec les fraises et meules conventionnelles et celle de l'épaulement avec les limes Bastian.

La stabilité et le contrôle digital s'avère de la plus haute importance avec la technique "d'enlèvement tissulaire accéléré" (turbine à haute vitesse). Certains doigts, les stabilisateurs, doivent s'appuyer solidement contre le maxillaire permettant à d'autres de contenir, de diriger ou d'arrêter les mouvements dits de précision des doigts essentiellement actifs. Ainsi seront évités les enlèvements tissulaires excessifs et les dérapages coûteux.

Pour l'uniformité de l'illustration, une incisive supérieure droite a été choisie.

L'attachement épithélial est un facteur anatomique d'importance, car il empêche l'infection de se propager aux tissus dentaires sous-jacents. Sa hauteur ondule au gré des variations de la profondeur du sillon gingival et l'expose dangereusement, en certains endroits, aux lacerations accidentelles de la fraise

ultra-rapide, lesquelles entraînent souvent une récession gingivale irréversible avec sa séquelle de pathologie tissulaire et de perte d'esthétique. Pour éviter ces traumatismes il suffit de rétracter mécaniquement la gencive en insérant pendant 8 ou 10 minutes (la durée de l'enlèvement de l'émail labial) de petits filets de coton au fond du sillon gingival.

Diviser ensuite, imaginaiement ou avec un crayon bien aiguisé, la surface labiale de la dent en six segments dont deux en héli-croissants, Fig. 1.

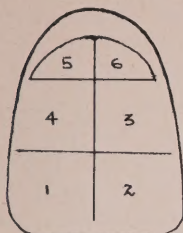


Fig 1

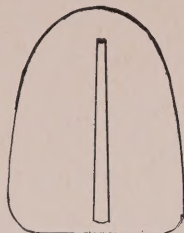


Fig 2

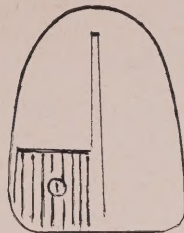


Fig 3

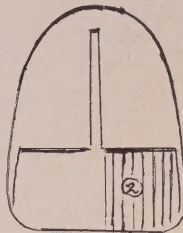


Fig 4

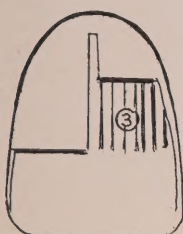


Fig 5



Fig 6

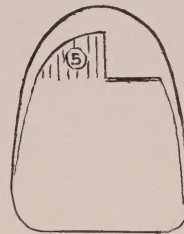


Fig 7



Fig 8



Fig 9



Fig 10



Fig 11



Fig 12



Fig 13

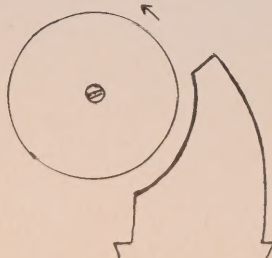


Fig 14



Fig 15

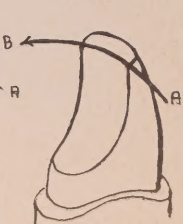


Fig 16

Prendre une fraise n° 169 ou 70 L et creuser méticuleusement sur la ligne médiane de cette surface un sillon gingivo-incisif de profondeur uniforme et ne dépassant que très légèrement le joint énamo-dentinaire. Ainsi s'établit une profondeur guide pour l'enlèvement des autres segments de la surface d'émail labial, Fig. 2.

Enlever maintenant numériquement les autres segments d'émail avec la même fraise, Fig. 3, 4, 5, 6, 7, 8. Diminuer le croissant cervical et ébaucher l'épaulement labial à moitié ou à environ 0.5 mm, Fig. 9A.

Avec la fraise No 169 ou 70L, découper un croissant à l'incisif et en arrêter la profondeur au quart de la longueur coronaire, Fig. 9B. On a ainsi formé une voie d'accès pour le fraisage de la partie cervicale, Fig. 10.

Découper ensuite la partie labiale et mésiale de l'épaulement, Fig. 11. la partie labiale et distale, Fig. 12, et finalement la partie linguale, Fig. 13. Conserver aussi large que possible la largeur mésio-distale. Tout l'épaulement est bien défini mais aucune finition n'est amorcée à ce stage.

Toujours avec la fraise No 169 ou 70L découper l'angle incisif en prenant garde de maintenir la paroi incisive parallèle à la facette d'occlusion normale de la dent, Fig. 14. La surface linguale de la dent se fait ensuite avec une meule de 5 à 6 mm de diamètre. Surveiller ici trois facteurs: 1) la courbe linguale de la pile est plus accentuée que la courbure naturelle Fig. 14, Fig. 17; 2) meuler de façon à obtenir une légère courbe mésio-distale Fig. 16 A-B, Fig. 15 A-B; 3) la hauteur du talon de la dent doit être sacrifiée le moins possible car elle contribue à l'aire cervicale de friction de la coiffe, Fig. 21, partie hachurée du schéma.

La dernière étape est la plus importante car elle est la clef du succès. C'est celle de la finition des parois, de l'épaulement, du rebord incisif et des angles. Il faut examiner minutieusement la pile et corriger implacablement toute déviation aux critères cliniques suivants. Les surfaces ou parois doivent être uniformes et lisses. Sinon, les corriger avec une fraise No 557 et des disques de papier sablé fin. La paroi labiale doit être légèrement courbe gingivo-incisivement et créer un angle aigu avec l'épaulement, Fig. 18 A; elle doit être aussi parallèle ou légèrement convergente avec la paroi du talon au lingual créant ainsi un anneau cervical de friction Fig. 21, région hachurée. La longueur idéale de la paroi labiale se situe entre les 2/3 et les 3/4 de la couronne naturelle, Fig. 19. Si elle est trop courte, la rétablir au moyen d'une coiffe métallique car, autrement, surviendront infailliblement des fractures en demie lune ou en croissant au gingival et du côté opposé au point de contact de la force. Si elle est supérieure on aura un éclatement de la porcelaine. Les parois axiales devraient être presque parallèles, y compris l'aire au talon des antérieures. Celle-ci joue un rôle important car elle assure avec la paroi labiale une seule voie d'insertion, Fig. 20, 21, et forme un angle droit avec l'épaulement. La paroi incisive est inclinée lingualement de façon à recevoir les forces d'occlusion à angle droit, Fig. 22. Pour la même raison la paroi linguale possède une double courbure, Fig. 22, 23, 24.

Les corrections de l'épaulement se font avec les limes Bastian, 1, 2, 3. Il forme un angle aigu ou droit avec les parois axiales, Fig. 18 A et B. Au labial il ne doit pas dépasser la moitié de la profondeur du sillon tandis qu'au lingual il n'est pas nécessaire qu'il y pénètre. L'épaulement labial devrait être nettement fini. L'épaulement lingual devrait être plus large que le labial surtout sur les canines. Sur les incisives inférieures il résiste mieux aux fractures s'il est terminé au talon et s'il ne fait qu'un angle aigu relativement à l'axe de la dent. Il est plus facile de prendre une empreinte d'un épaulement qui ne se rend pas jusqu'au fond du sillon gingival et les cas de récession gingivale sont ainsi évités. Les épaulements interproximaux, Fig. 13, peuvent être plus étroits, presque biseautés dans les cas de dépressions mésiales et distales avec les dents en forme de cloche. Ces épaulements semblent n'influer que très peu sur la force de la coiffe. Autant que possible, il est préférable de terminer ces épaulements presque au fond du cul-de-sac gingivo-dentaire de façon à obtenir labio-lingualement une surface plate.



Fig 17



(A)



(B)

Fig 18

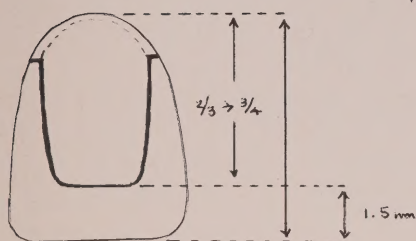


Fig 19

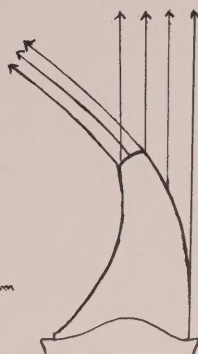


Fig 20

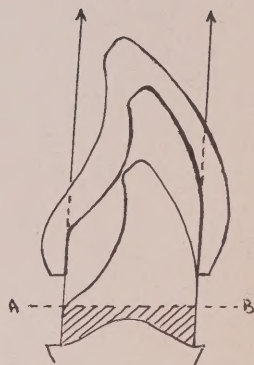


Fig 21

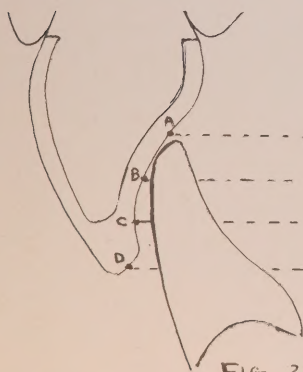
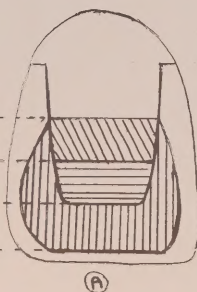


Fig 22



(A)



Fig 23



Fig 24

Il ne devrait pas exister d'angles avec les surfaces axiales. Les comparer à l'arc d'un oeuf, Fig. 23. La forme générale ne devrait pas être circulaire lorsque vue de l'occlusal. L'angle incisif devrait être situé aussi labialement que possible, Fig. 18. La paroi incisive, l'angle incisif et la paroi linguale sont finis en analysant l'articulation de la future coiffe, Fig. 22A: Aire A-B: zone d'occlusion

centrique: aire B-C: surface utilisée durant l'occlusion fonctionnelle; aire C-D: surface fonctionnelle active mais dangereuse parce que sans support dentinaire.

Pour conclure, la porcelaine est très compressible mais résiste mal à la tension parce qu'elle n'a pas ou presque pas d'élasticité. La pile doit être préparée de telle façon que toute force appliquée sur la porcelaine soit supportée par les parois dentinaires à angle droit avec les lignes de force, ou à peu près. L'épaisseur ne corrige pas ses faiblesses.

Summary

Ever since its appearance at the turn of the century, research and technological advances in dentistry have led to constant improvement in both the ease of preparation and physical properties of the porcelain jacket crown. The development of the high speed turbine has contributed to making the preparation a standard procedure for the general practitioner; and new horizons have been opened in cases of badly damaged crowns and difficult occlusion by the newly improved metal bonded porcelains.

Needless to say, the porcelain jacket crown continues to offer a challenge to the dentist in that it demands precision and a more critical sense than many procedures. A simple yet proven technique taught at the School of Dentistry, University of Michigan, Ann Arbor, USA, is described in this article.

This method is divided into eight stages:

1. Gingival retraction
2. Scribing the labial surface into six parts
3. Placing a central groove as a warning depth
4. Methodical removal of the labial segments
5. Cutting out the incisal crescent
6. Preparing the shoulder
7. Removal of enamel from the lingual concavity and the incisal edge
8. Finishing the walls, shoulder, angles and incisal edge.

The basic instrument is a high speed turbine. Finishing is generally accomplished using conventional stones and burs, and Bastian files for the shoulder.

The tooth should be prepared so that all stress applied to the porcelain will be supported by the preparation as nearly as possible at right angles to the lines of applied force. Thickness of the jacket is not a requisite for strength.

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* ORAL BIOPSY - AN IMPORTANT AID TO EARLY DIAGNOSIS

Captain G.W. Hill, DDS



Introduction

Legally, the treatment of an oral lesion without the aid-biopsy can be construed as malpractice. However, it should not be necessary to hold this type of threat over the head of a professional man to convince him that he should use biopsy as a diagnostic aid with as much compulsion as he uses radiographs. Statistics indicate that too few dentists use this invaluable aid for the early diagnosis of oral lesions.

Biopsy can be defined as the microscopic and/or bacteriologic examination of tissue or other material removed from the living body.

In order to implement the correct treatment for a questionable oral lesion as soon as possible, early and accurate diagnosis is essential. This aim cannot be achieved without the use of biopsy, which is, generally speaking, a simple, rapid and painless procedure well within the capabilities of all dentists.

It must be emphasized, however, that it is the dentist's responsibility to recognize the existence of a lesion in the first instance and that in order to do so, a thorough examination of the oral cavity is a "must".

Indications for Biopsy

1. When careful examination fails to lead to a diagnosis

It is by no means necessary to biopsy every lesion that is found in the mouth, because many lesions present little difficulty in diagnosis, e.g. Fordyce granules, torus palatinus, herpetic stomatitis. But when the clinician cannot readily recognize a lesion as being harmless, it should be submitted to biopsy examination.

2. Suspected precancerous lesions

Suspected precancerous lesions should be submitted for biopsy examination. Potentially dangerous lesions such as leukoplakia fall into this category. Only biopsy is conclusive in determining whether white keratotic lesions are innocuous or not. Malignant changes are occasionally encountered in hyperplasias resulting from chronic irritation, so these should be examined microscopically.

3. Lesions presenting clinical signs of malignancy

a. persistence

This article was given as a study group oral presentation by Capt GW Hill during the Captain to Major Qualifying Course 12 Sep-21 Oct 66.

- b. progressiveness
- c. induration
- d. ulceration
- e. fixation of the base

Lesions with these characteristics must be submitted to biopsy examination without delay.

4. Lesions failing to respond to recognized therapy in a limited period of time

Whether a lesion should be treated and observed, is determined by the presence or absence of an obvious cause, e.g. jagged tooth, ill fitting denture. Any lesion which does not respond to recognized therapy in a limited period of time (ten days to two weeks) should be biopsied.

Many clinicians feel that all abnormal tissue removed from the oral cavity should be examined by a pathologist. This includes periapical lesions, follicular and fissural cysts, hyperkeratotic lesions, chronic ulcers of the mucosa, swellings of unknown etiology, all lesions and hyperplastic tissue resulting from chronic inflammation.

Who should perform the biopsy

It matters little who does the biopsy as long as it is done correctly and without delay. The general practitioner should perform the biopsy when it is within his capabilities. It is universally agreed that an obviously malignant lesion should not be biopsied by the general practitioner. In cases of suspected hemangioma and in most deep-seated lesions involving the bone or deep areas of soft tissue, it is best to refer the patient to the surgeon who will treat the condition.

Precautions in obtaining specimens

The value of the biopsy procedure should be explained to the patient and his permission should always be obtained. Indiscriminate biopsy without a thorough history and clinical examination is to be discouraged.

1. Pigmented lesions which suggest the presence of melanin and purplish lesions which appear to be of vascular origin should always be excised - never incised.
2. The specimen should be removed with a minimum of manipulation to avoid possible spreading of tumor cells along lymphatic and vascular channels. The risk of spreading cells is secondary to making a definitive diagnosis.
3. Infection is seldom a problem.
4. The periosteum should be avoided whenever possible. It acts as a deterrent to tumor invasion into bone and to the spread of bone infection.
5. The tongue lacks a submucosa, is extremely vascular, and must be biopsied with caution.
6. Encapsulated lesions should not be incised if it is possible to excise them.
7. Surgery in previously irradiated tissue can lead to serious complications.

Biopsy Techniques

Armamentarium

- (1) local anesthetic and syringe

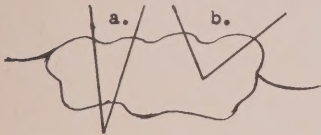
- (2) topical antiseptic (colourless)
- (3) scalpel
- (4) long pointed surgical scissors
- (5) tissue forceps which grasp but do not crush tissue
- (6) sutures (preferably non-absorbable) and needle holder
- (7) surgical sponges
- (8) wide mouth bottle with 10% formalin about 15 to 20 X specimen volume

Types of Biopsy

- (1) Excisional
- (2) Incisional
- (3) Aspiration

Excisional Biopsy consists of the complete removal of the entire lesion with an adequate margin of normal tissue on all sides. This is the method of choice and should be used whenever the size of the lesion permits.

Incisional Biopsy is indicated when the lesion is too large to permit removal of the entire specimen at the time of biopsy. A **representative** section of the lesion must be removed. Multiple small sections are preferable to a solitary biopsy. Sections should be removed from the margin of the lesion and some of the adjacent normal tissue should be included. Areas of necrosis should be avoided and the incision should be of sufficient depth to include the underlying tissues. Thin deep sections should be taken rather than large shallow ones. If several lesions are present, specimens should be taken from the most representative.



a. correct section

b. incorrect section (wide and shallow)

Aspiration Biopsy is used for large relatively inaccessible masses and for lesions which appear to be soft and semi-fluid. Aspiration is done by inserting a large gauge needle into the softer parts of the mass and withdrawing fluid and cells into the syringe. More than one sample may be necessary to demonstrate positively the nature of the disease process. This method is used most frequently to biopsy bone lesions and is of value in determining the presence of fluid in an apparently cystic lesion.

Comparison of biopsy and oral exfoliative cytology

Cytology is complementary to biopsy and not a substitute for it. It can be a valuable aid in the diagnosis of early cancer. Some of the indications, values and limitations of biopsy and cytology include the following:

- (1) Biopsy is necessary for a definitive diagnosis of all neoplasms.
- (2) Even with a positive cytologic diagnosis, a biopsy is required for final diagnosis.
- (3) Immediate biopsy is indicated for lesions suspected of being malignant, for elevated lesions in which the surface epithelium is not involved, and for thick white lesions.
- (4) Cytology is useful for epithelial cells only.
- (5) Cytology is of value in influencing patients to consent to a biopsy and also as a follow-up for these patients who have been treated for oral malignancy by radiation.
- (6) Cytology does not require anaesthesia.

Submitting the Specimen and the Case History

It is important that the pathologist receive the tissue in a condition which will allow him to make an accurate diagnosis. Hence, procedures that tend to distort the specimen such as the following should be avoided: injecting anaesthetic into the lesion, the use of electrosurgical equipment generating excessive heat, and the use of serrated forceps to grasp the specimen.

The specimen should be placed immediately into the fixative solution. A label stating the patient's name, the date, and the origin of the specimen should be placed on the bottle and not on the cover. If more than one specimen is removed from a patient, they should be placed in separate, clearly labelled containers. With aspiration biopsy, express small samples onto a piece of gelfoam and large amounts into a test tube containing fixative.

A complete, orderly case history should accompany the specimen so the pathologist will have all pertinent facts to assist him in making a diagnosis. History forms are generally supplied by the pathologist.

The following information should be provided:

- a. Name, sex, age, race and occupation of the patient.
- b. Exact location of the lesion. Refer to common anatomic landmarks of the mouth. Diagrams are often useful.
- c. Size of the lesion (length, width and depth).
- d. Colour of the lesion (compared with surrounding normal tissue).
- e. Shape of the lesion (general contour).
- f. Type of attachment (pedunculated or sessile).
- g. Mobility (determine by palpation whether freely movable or fixed).
- h. Duration and rapidity of growth.
- j. Symptoms e.g. pain, altered function, disability.
- k. Previous treatment (medical, surgical, ionizing radiation).
- l. Regional lymph node involvement (by palpation).
- m. Submit radiographs when applicable (i.e. with intrasosseous lesions).
- n. Clinical slides and study casts may be submitted.

Biopsy Report

Because of regional differences in terminology (e.g. Leukoplakia) there should be no hesitation about frank discussion of terminology and clinical and histological features with the pathologist.

A negative biopsy report is not final and does not mean the clinician should forget the lesion. His responsibility is to continue to evaluate any lesion which is suspicious enough to biopsy and which persists or recurs. A negative incisional biopsy of a truly suspicious lesion always requires a rebiopsy. Complete excision or multiple incisional biopsies help to avoid this requirement. A negative report from an aspiration biopsy does not mean the absence of a neoplasm; aspiration must be repeated or open biopsy performed.

Summary

When confronted with a diagnostic problem that cannot be solved by conventional means, biopsy should be used. If the lesion seems innocuous, a slight delay to determine whether it will resolve with conservative therapy may be indicated. If it does not resolve however, or if there is any suspicion of malignancy, immediate biopsy is indicated.

An excellent rule to follow is - IF IN DOUBT - DO A BIOPSY.

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* OCCUPATIONAL HAZARDS

Captain PR McQueen, DDS



The occupational hazards of dentistry are taken for granted and most members of the profession are indifferent to them. This shouldn't be the case, particularly in view of the results of a survey conducted by the American Dental Association on thousands of retired dentists. The key finding indicated that 50% of retired dentists have been obliged to do so because of ill health. It is far from comforting to learn that the dental profession, as a group, has nearly the highest cardiac disease rate. Current statistics indicate that 54% of dentists die from cardiac diseases.

For convenience, occupational hazards are divided into two groups:

Physical

- a. Cuts and abrasions
- b. Respiratory
- c. Optical
- d. Musculo - skeletal
- e. Radiation
- f. Poisons and drugs
- g. Skin reactions
- h. Aerosol effect

Mental

- a. Stress
- b. Noise

* This article is based on a study group oral presentation by Capt PR McQueen during the Captain to Major Qualifying Course 12 Sep-21 Oct 66.

Physical

a. Cuts and abrasions - infection

The mouth is a large reservoir of organisms. The dentist works in this environment, encountering sharp teeth and using sharp instruments. The potential for minor cuts and abrasions is high and this of course opens a port of entry for infection. Fortunately, infections from this source seldom occur. The rubber dam minimizes the risk.

b. Respiratory

The dentist operating at close range is constantly enveloped in the patient's expired air which broadcasts bacteria and viruses in droplet form. The rubber dam and also the face mask help to protect the operator. Infection from this source is uncommon, a fact which may be attributed to the following reasons (which also apply to cuts and abrasions):

- (1) saliva is somewhat bacteriostatic,
- (2) individuals usually have enough resistance (and possibly acquired immunity) to cope with exposure to infection on this scale.

c. Optical

There are two main hazards involving the eyes - foreign objects and eye-strain. Sprays, water jets and high speed rotors place an envelope of enamel, calculus and amalgam fragments around the operator. If one does not wear corrective glasses, protective lenses should be acquired. Then too, while operating, the dentist works in a restricted area concentrating for long periods at short focal distances. Good lighting and regular eye examinations are essential.

d. Musculo - skeletal

All musculo - skeletal and associated problems stem from the fact that the dentist is usually confined to a small operatory, often leaning over the patient and holding unnatural postures for long periods of time. The chair-side stool is only a partial remedy. Alternating standing and sitting positions is advantageous and the operator should attempt to assume a posture which will keep his weight well balanced. Hard floors are to be avoided and good fitting shoes are essential. New developments in dental equipment are producing more conveniences and energy conserving devices than ever before, but this in itself will by no means provide a solution to the problem.

Probably the most common condition precipitated by occupational posture for dentists is stagnation of the blood supply in the lower extremities with resultant varicose veins and hemorrhoids. Preventive measures to stimulate circulation include: attempting to assume proper posture whether sitting or standing; alternating sitting and standing postures by planning a change in pace in office routine throughout the day; undertaking some compensating activity by means of a hobby or sport.

When members of the profession become recognizable because of characteristic infirmities (the curved spine, right shoulder droop, varicose veins etc.), this must surely indicate a lack of interest in maintaining good health.

e. Radiation

Most dentists, when queried about radiation state that they "have a

good unit and always stand back when taking x-rays". In a survey conducted by the American Dental Association in the Chicago area it was revealed that 40% of 177 dentists had faults in their technique and/or equipment. The outstanding feature concerning the radiation hazard is that damage is irreparable. There is no threshold or minimum damage, it is either non-existent or severe. A cell damaged by radiation may be destroyed or the production of a mutation may be stimulated. Indications that damage has occurred may not become apparent for many years, as was evidenced by most of the original researchers in radiology many of whom died prematurely or were severely burned.

A constant check on equipment and technique should be maintained by wearing a dosimeter film badge.

f. Poisons and drugs

Many of the drugs and materials used by dentists are poisonous and some can be absorbed either through the skin or by inhalation. Mercury is a good example of a material from which there is little risk of poisoning but with which long term accumulation is possible. In the early stages mercury poisoning is asymptomatic, but when more severe, the symptoms include mild headache, irritability and unwarranted fatigue. It should be realized that mercury vaporizes at room temperature and one part per million is the threshold dose. Prevention is simple; mulling amalgam in the bare hand is to be avoided and spilled mercury on counter tops or floors should be disposed of.

g. Skin reactions

The dentist depends upon his hands for his livelihood, and they are subject to abuse from constant washing and exposure to irritating drugs and chemicals. The antiseptic soaps commonly used remove the natural oils from the skin permitting abrasion of the keratinous layer, with resultant cracking, edema and inflammation. Dermatitis may be classified as one of the following types:

- (1) Primary Dermatitis is characterized by redness, inflammation and itching and results from the breakdown of the keratinous layer as already described. Prevention is by employing mild soaps preferably without hexachlorophene, restricting vigorous washing, and by using gloves.
- (2) Allergic Contact Dermatitis is caused by a reaction to some specific substance which in some cases is slowly acquired. Its induction may be expedited by primary dermatitis. Procaine dermatitis is an excellent example. When allergic to one substance, the individual often becomes allergic to other substances similar in chemical composition and structure. Treatment is by complete avoidance of the irritant. In order to prevent the induction of an allergy, minimal skin contact with drugs and local anaesthetics should be practised.
- (3) Infective Dermatitis is characterized by the defensive mechanism of the skin becoming hypersensitive to a normally mild low grade infection, i.e. the skin becomes allergic to the infection. Blisters are common with this type of dermatitis.

h. Aerosol effect

Concern with this effect when using the air-turbine in the mouth is comparatively recent. By placing blood agar plates at various distances from the patient's mouth while the turbine was in use, pathogens were cultured. Maximum dispersal was at a distance of two feet, but pathogens were also present at distances up to four feet. It is interesting to note that when using

the turbine, although the rubber dam and evacuator were used, and even when not contacting the tooth, as long as the bur was rotating in the mouth an envelope of infection was created. It consists of minute air and water particles pushed from the mouth by the air turbulence. Tests were carried out to determine whether or not the aerosol effect could be reduced by using mouth rinses and it was found that when the patient:

- (1) rinsed with water - 25% reduction
- (2) rinsed with mouthwash - 75% reduction

Wearing a face mask is effective in protecting the operator but is not always practical. This comparatively new problem has not yet been satisfactorily resolved.

Mental

a. Stress

Stress cannot be discussed as an entity because it is linked with physical fatigue, physiologic ailments and overwork. Stress may be manifested in a variety of pathological conditions including hypertension, peptic ulcers, tremors, alcoholism, etc. It is important that the individual should become aware of the problem if and when it exists so that some outside activity or diversion can be undertaken to alleviate it.

b. Noise

Noise of the sound frequency produced by the air turbine and its possible effect on hearing has recently come under investigation. In earlier studies of dentistry and noise it was observed that sound of high frequency ameliorated the pain response. From these studies audio-analgesia was developed. However, as air-turbines were designed with ever increasing speeds, the question of possible impairment to hearing caused by prolonged exposure to the sound frequencies involved became evident. Briefly reviewing the hearing process, if sound is of the type which will cause pain, a reflex becomes effective to separate the malleus and incus, i.e. a circuit breaker effect. This natural safeguard may fail, however, since the ear can suffer permanent damage from sounds too weak to cause pain. Sound frequencies produced by the air-turbine happen to fall into this category and if used for 7-8 hours per day approach this threshold. Since in practice they are not used continuously, hearing impairment is not likely to occur.

Members of the profession should be made aware of the possibilities of trauma as higher speed turbines are developed with the concomitant higher frequency sound.

Summary

Some of the reasons for half of the members of the dental profession retiring prematurely from practice have been reviewed. Hazards only recently recognizable have been discussed and it seems certain that more will develop with further sophistication of equipment. Perhaps the most important lesson to be learned is to be keenly aware of the hazards that exist, because ignorance of them is the greatest hazard of all.

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Recent statistics reveal an alarming increase in the number of reported cases of primary and secondary infectious syphilis. This, coupled with the evidence that not all cases are diagnosed or reported, demands that the dentist have a greater awareness of this disease, not only from a diagnostic standpoint, but also from the standpoint of personal safety.

US NAVY CORRESPONDENCE COURSE PROGRAM

In 1962 the U.S. Navy invited participation by RCDC officers in the complete US Naval Dental School Correspondence Course Program. As well as supplying all course material, the USNDS kindly offered to undertake the administrative details including the grading of assignments and the issuance of a letter indicating satisfactory completion.

The courses are prepared by certified specialists well versed in the latest developments in dentistry and the highest standards of professional practice. Course content is based on widely accepted dental textbooks and on texts written by the staff of the US Naval Dental School. The courses are not intended to replace other training courses but to provide continuing education for those officers who desire to augment their professional knowledge regardless of location or level of experience.

Since acceptance of the US Navy offer the courses have proven to be very popular and are highly regarded by those RCDC officers who have participated. Thirty RCDC officers serving in Canada and abroad are currently undertaking this training. To date ninety-six courses have been completed in the following subjects:

Oral Diagnosis	-	21
Endodontics	-	14
Operative Dentistry	-	13
Oral Surgery	-	13
Periodontics	-	11
Prosthodontics		
Part I Complete Dentures	-	4
Part II Partial Dentures	-	9
Part III Fixed Partial Dentures	-	6
Removable Partial Dentures		
Planning and Design	-	5

In 1966 the Correspondence Course Program was completely revised and new courses introduced. A brochure outlining these courses has been distributed to all RCDC units. Two courses, Oral Surgery and Operative Dentistry, are still in the process of revision and will be available during 1968.

The privilege of enrolment is greatly appreciated and has proven beneficial to all participants. In the case of junior officers it has been especially rewarding as it has allowed them to determine and develop their interest in a specific discipline of dentistry.

In addition to their value in increasing professional knowledge these correspondence courses exemplify the excellent liaison and co-operation which has been established between the US Naval Dental Corps and the RCDC.

Clinic Management Course Held at RCDC School

A Clinic Management Course (or "workshop") was held at the RCDC School from 30 May-1 Jun 67 with 20 RCDC officers from clinics across Canada participating.

The main objective was to permit the interchange of ideas on clinic management between experienced and capable dental officers in charge of clinics; the information gained to serve as a basis for developing future courses on this subject for less experienced officers. The course was also designed to provide participating dental officers with information useful in managing their own clinics. Problem areas in the field of clinic management were discussed and defined so that recommendations could be submitted to DGDS.

The format of the workshop was the round table discussion with 16 of the participants presenting papers on various aspects of clinic operation and management. Following each presentation the meeting was open to full and frank discussion with recommendations noted for submission to DGDS.

Lieutenant Colonel DH Protheroe, chairman of the workshop, set the theme with an opening paper entitled "The Dental Treatment Problem and Possible Solutions". Methods of closing the gap between dental treatment needs and resources were discussed and the various facets of this problem were dealt with in the papers that followed. The philosophy of preventive dentistry was presented and the value of this approach to Service dentistry outlined. The employment, training and staffing of RCDC clinics was the subject of several papers, each dealing with a specific trade grouping and its part in the over-all operation of the clinic.

From the managerial point of view, public relations, trade structures, confidential reports and treatment returns were subjects which were considered.

The workshop's greatest value lay in the frank discussion held between long term dental officers who drew on a wealth of experience in producing their topics.

This is the first course of this type conducted within the RCDC and it proved to be a highly productive three-day activity.

The RCDC News

Division News

Brig BP Kearney, Director General Dental Services, attended the meeting of the Board of Governors of the Canadian Dental Association 8-12 May.

Lt-Col G MacDougall inspected Militia dental elements in London, Toronto, Brandon and Victoria as judging officer for the RCDC Militia Efficiency Competition held annually in Militia Units across Canada.

Brigadier AG Rowell, Director of Dental Services Australian Army, visiting Canada en route to Viet Nam was the guest of the Division Officers at a luncheon 19 June.

The Director General attended the Fédération Dentaire Internationale meeting held in Paris 5-11 Jul in conjunction with a visit to 4 Fd Dent Coy with the Brigade in Europe 12-15 July.

Lt-Col WR Thompson, Maj JVF Chatwin and Maj CA Casterton presented papers at the Clinic Management Course - RCDC(S) 30 May-1 Jun 67.

11 Dent Unit

No 11 Mobile Clinic on Display

No 11 Mobile Clinic has been fully equipped (with an Encore Unit etc) and repainted. It will be included with the Armed Forces Centennial Caravan which will tour remote areas of Alberta from 2 Aug-30 Sep 67. Officer Cadet P Wooding and Sgt Green BA will be in charge during August. Capt V Lanctis and Cpl Schulz EJ will handle the September detail.

Commissioned from the Ranks

Canadian Forces Headquarters recently announced the promotion of WO2 Johnston C. to the rank of lieutenant.

Heartiest congratulations are extended to Lt Johnston who joined the Service in 1943. Since the War he has served with 25 CFDU (Korea) and 35 FDU (France) along with various postings in Canada. He will move from Victoria to 1 Dent Unit in Ottawa, where he will take up his new duties as laboratory officer for the RCDC.

Postings and Retirements

Personnel of the Edmonton area gathered recently to wish "God Speed" to Maj "Chuck" Sivell, Sgt Ken Shergold, Sgt Ron McDonald and Miss Mary Ward, all of whom are leaving on posting. On that occasion best wishes were also tendered to Capt Gerry Purcell who has taken his release and opened a practice in Mission City, BC. The party was rendered particularly nostalgic (according to the news submission, even though the participants look far from nostalgic in the accompanying photo) in honouring Harry Hodkinson who recently retired after 27 years of service with the Corps.



From Left to Right:

SSgt Harry Hodkinson,
Sgt Ron McDonald,
Miss Mary Ward, Capt
Gerry Purcell, Major
"Chuck" Sivell and
Sgt Ken Shergold.

Miss Warnock retired as a dental assistant on 23 May 67 after many years of service with the RCDC at HMCS Naden. All Corps members who knew Mae wish her many years of happy retirement.

Special Events

Col and Mrs GC Evans attended the Graduation Exercises for their son Michael on 2 Jun 67 at the Royal Military College, Kingston.

Sports

Sgt Paul Fox in Calgary had a "mixed" run of luck recently. He was so deadly

with his putter that he walked off with low gross in a local tournament and won an umbrella. His prize was later stolen at another golf course.

Belated congratulations are in order to SSgt and Mrs Gerry Shand whose team won the mixed bowling championships at Cold Lake.

12 Dent Unit

Conferences and Meetings

Col SG Bagnall, Lt-Col FD Charman and Capt JR Robertson attended the Maritime Provinces Dental Convention in Moncton 7-9 Jun 67. Lt-Col Charman's table clinic on Pin Amalgam Restorations and Capt Robertson's on Apicoectomy were well received by those attending.

Duty Cruise

Capt JG Thompson and Sgt Arsenault JB comprised the dental element aboard the Cape Scott on her last cruise to Bermuda during the period 25 May-16 Jun 67.

Special Events

The Naval Assembly held in Halifax during the period 21-26 Jun was most impressive. It brought with it many requests for emergency dental treatment for military personnel of visiting foreign ships.

An informal party was held at the Snack Bar, Gorsebrook, to bid farewell to several personnel leaving the unit. The CO presented a travel clock to each departing member, perhaps an appropriate gift on such an occasion.

Col SG Bagnall (with his family) was the first representative of this unit to visit Expo 67, having done so during the month of May. He reports that it was extremely interesting - but a little on the cool side for camping at that time of year.

Sports

Capt CJM Boston, DO at Greenwood, owns a sailboat and has invited dental personnel to enjoy an afternoon of sailing. Anyone interested in getting a good wetting is welcome.

In Halifax, the Garrison Golf Club has been practically "taken over" by the Corps with Maj AT Hinch as President, Capt M Kostyniuk as Secretary and Capt JF Mullins as Statistician.

13 Dent Unit

Meetings and Conferences

Maj WH Murray addressed the Bay of Quinte Dental Society on the subject of Endodontics. The Meeting was held at CFB Trenton 19 Apr 67 with over 20 dentists in attendance and the speaker was well received.

Lt-Col JM Smith spoke to the luncheon meeting of the London and District Dental Society 13 Apr 67 on the subject "Oral Cytology". The talk was given at the request of Drs HA Hunter and DL Anderson of the University of Toronto Faculty of Dentistry in order to encourage greater use of the technique in the London area. Excellent slides were provided by the Faculty.

Course Award

Pte James TA was sent a Junior NCO course award in the form of a small plaque as the top Junior NCO of 4 Troop Course 6702, with congratulations from Col CA Greenleaf, Commandant of the Combat Arms School.

13 Dental Unit Centennial Golf Tournament

This tournament was sponsored by 13 Dental Unit as its Centennial project. It was held at Trenton Friday 23 Jun 67 with 56 RCDC golfers participating.

Sgt Hill WE of 1 Dental Unit, Ottawa, won 1st Low Gross in "A" flight, with Lt-Col GE Windsor of Canadian Forces Base Petawawa as runner-up. AVM Hull, Commander ATCHQ was the "A" flight low net winner. Other major prize winners were: Capt MB Fisk low gross "B" flight and Capt VO Bergland low net; Cpl RW Danyluck low gross "C" flight and WQ2 VR Kidd low net.

Brig Kearney opens the tournament by driving the first ball. (left elbow straight?)



(L to R) Col RGH Cunningham, Col GR Covey, Col LG Craigie (partially hidden), Brig EP Kearney, Brig KM Baird (ret'd) and AVM AC Hull.

Retirement

Sgt Vout AC has retired from the Dental Corps after 26 years of service. He was presented with a candelabra from 13 Dental Unit following the Centennial Golf Tournament banquet. Best wishes from his friends in the Corps go with "Al" and his family for a happy and successful future.

14 Dent Unit

Special Events

The Annual Posting Party for this Unit was held at the Recreation Centre CFB Winnipeg 12 May 67. Farewells were said to: Majors Bob Bryant and Lee Reynolds, Captains John Girard and Michael Harach, SSgt Storms JM, Cpl Boles MN (RCAF) and Cpl Bristow GB. To SSgt Yeates JR and Sgt Fenton DL who were taking their release it was farewell and the best of luck.

15 Dent Unit

Dental Public Health

A Dental Public Health program is being written into the Cadet curriculum in Camp Farnham this year. It will consist of lectures and demonstrations; and since the cadets come from all across Canada it is felt that this is an excellent opportunity to "spread the word".

Visit

Brig G Rowell, Director Dental Services Australian Army, visited Montreal 21 Jun 67. Col Cornish escorted and arranged appointments with the Deans of both Dental Faculties. Brig Rowell was most impressed with the new clinic accommodation at the University of Montreal.

Retirement

Maj PH Guevremont was dined out of the RCDC at a formal mixed dinner 9 Jun 67 at CFB Montreal Officers' Mess after 22 years of service in the Dental Corps. Major Guevremont took his DDPH while in the Corps and has been very active in this field in 15 Dental Unit. Best wishes go with Paul on his retirement and in his new career in La Belle Province.



Col Cornish (l) is shown presenting Maj Guevremont with the RCDC crest (framed)

Sports

Capt RF Cooper captured the Men's Singles Badminton Trophy in a tournament held at RCAF Mont Apica. He also teamed up with Mrs Cooper to win the runner-up trophy for Mixed Doubles.

Dental Laboratory Technician Level 6 Course

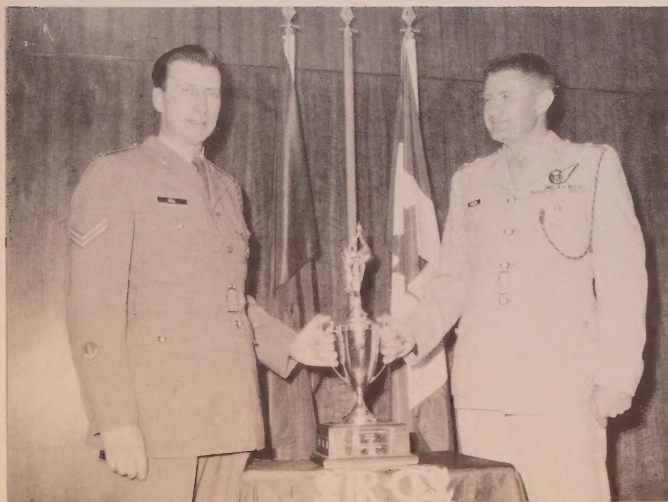
8 May - 23 Jun 67



Front row L to R - (staff) Sgt Hossdorf J, Capt DD Robertson, Lt-Col PS Sills, Col GR Covey, Lt-Col DH Protheroe, Sgt Rothwell KS.

Back row L to R - (on course) Sgt Werkmann AE, Cpl Stenbaugh RH, Sgt Hughes AJ, Sgt Bleakney JC, Cpl Sabine-Pasley CS.

Dental Assistant Course Trophy



The Dental Assistant Course Trophy, donated by Lt-Col DH Protheroe, was awarded for the first time 19 May 1967.

Cpl Riel JAG was the successful candidate and is shown receiving the trophy from Lt-Col Protheroe.

Conferences and Meetings

Maj AG Taylor spoke to the Grey-Bruce and Dufferin Dental Society on 5 Apr 67. His subject was "Crown and Bridge Application with Pin-reinforced Amalgam Restorations".

Corps Anniversary Celebrations

The 52nd Anniversary of the Corps was celebrated with a very successful all ranks dance on 21 Apr 67.

The other Corps Anniversary function was a Church Parade, the order of dress being Blues with medals. A total of 14 officers and 42 ORs attended, including staff and candidates.

Special Events

The Dent A Course candidates held a party for the Training Wing Staff on 18 May at the Huron Club. Games, refreshments and food were enjoyed by all.

At the TGIF on 9 Jun, the Comdts of CFMTC and RCDC(S) did a mass "mug out" for all officers leaving on posting during Jun/Jul. Incidentally, the silver mugs have crests of both CFMS and RCDC engraved on them and they make rather a unique memento. Lt-Col Protheroe, Maj Kelland and Lt Carrier were presented with their mugs on this occasion.

An all ranks RCDC(S) staff party to say farewell to all departees was held on 16 Jun. Departing officers were presented with RCDC(S) plaques and suitably engraved mugs for the ORs. In addition, a special gift of an attache case was presented to WO1 EB Morse on his retirement. There were nine presentations made that evening, liberally interspersed with refreshments.

Sports

The RCDC(S) held its Annual Golf Tournament on 14 Jun. Cpl John Clint was the low gross winner with an 80 and was presented the JW Fletcher Trophy by Col Covey. There were 25 participants including three CFMTC guests.

On 21 Jun nine of the RCDC School's "best" participated in the Annual Golf Tournament of the Grey-Bruce and Dufferin Dental Society at Owen Sound. Majors Wright and Marion were the only winners in the group. All were made welcome by President Tackaberry and his committee and enjoyed an evening meal with our confreres to the North.

1 Dent Eqpt Dep

Special Events

No 1 Dent Eqpt Dep paraded as a separate unit for the Base Commander's Annual Inspection Parade held on 9 Jun 67 with three officers and 14 other ranks on parade.

The technical repair section prepared the RCDC display for Armed Forces Day held at CFB Petawawa on 9 Jun 67. The display proved to be quite an attraction to the public. A terrific rain and wind storm during the display blew the roof off one of our cubicles, adding to the excitement.

No 1 Dent Eqpt Dep along with 3 Dental Clinic held a very successful beach/barbecue party on 29 Jun 67. The party was held to say farewell to members of both units departing on posting during the summer months.

Sports - Cpl Boulianne bowled a three game cross of 933 while participating in unit bowling.

This photograph is X years old and helps to form part of the record of our Corps history. Some of the members in the photo (believe it or not) are serving in the Corps today and others have recently retired. You are invited to attempt to identify as many as possible and guess when the photo was taken. Answer on page 27. NO CHEATING!



1 Dent Unit

Conferences and Meetings

Captains Andrews and Tukums attended the CDA-ODA Convention in Toronto while on annual leave. Capt Tukums was the winner of the prize for "hobbies" and Mrs Tukums was chosen Queen of the Ball. It should be explained that Capt Tukum's hobby is jewellery making and as a result of his success at the CDA-ODA Convention, he has been invited to display his collection at the Canadian National Exhibition Hobby Show this fall.

Special Events

A farewell party was held at CFB Rockcliffe on 16 Jun 67 for personnel from this Unit on posting during the summer period.

Retirement

The farewell party held at CFB Rockcliffe on 16 June was also used as an occasion on which to honour Capt A Van Ryssel on his retirement. "Van" has served with the Corps for approximately 28 years and gained the distinction in Nov 60 of

becoming one of the first post-war laboratory officers. He was presented with a silver tray from No 1 Dental Unit.



He was also feted by RCDC officers in the Ottawa area.

Col LG Craigie (1) is shown presenting Capt A Van Ryssel with the RCDC crest (framed)

Capt Van Ryssel has accepted an appointment on the staff of the Dental Faculty, University of Manitoba. Best wishes from the Corps go with him and his family.

4 Fd Dent Coy

Conferences and Meetings

The dental officers of 4 Fd Dent Coy continue to sponsor monthly professional meetings to which RADC and USDC officers are invited.

On 21 Apr 67 the US Army dental officers of Rothwestern dental clinic near Kassel were hosts for the meeting. Lt-Col Louis H Guernsey USDC gave an excellent presentation on "Surgical Principles as applied to Oral Surgery".

On 25 May 67 the meeting was held in Fort Henry with a presentation by Maj JF Begin RCDC on "Infection and Sterilization", and one by Capt Motley USDC on "Pin Reinforced Restorations". A Canadian Centennial film was shown in the evening.

The NCO Study Group meeting on 25 May 67 was devoted to the new system of cataloguing dental stores with WO2 Bennett leading the discussion.

Special Events

On 28 Jun 67 the annual rotation party was held in the Old Red Patch Club in Soest. Souvenir gifts were presented to the 11 members of the unit departing in the near future. Sgt Reid and his committee arranged an excellent banquet and dance.

Capt Griesbach won the 4 CIBG Centennial Slogan Contest with his entry - "4 Brigade On Guard for Liberty Celebrating Unity". The prize, perhaps appropriately, is a one-week holiday with his family at the US Armed Forces Recreation Centre in Garmisch.

Sports

Capt Swanzey was the captain of a combined British-Canadian Judo team which competed in Amberg, Bavaria Jun 19-23. This competition was part of the Anglo-German week celebrations. The competitors were billeted in German homes where Capt Swanzey had ample opportunity to practise his developing mastery of the German language.

35 Fd Dent Unit

Dental Clinics in France Close

The dental clinics at Marville and Metz were officially closed in June 67. No 1 Clinic (Marville) has been reopened at Lahr, Germany.

Canadian Forces serving within NATO were obliged by the French Government to vacate French soil by June 1967. No 1 Air Division Headquarters has been re-located at Lahr in the Black Forest area of Germany.

Meetings and Conferences

Lt-Col Brick and Capt CM Mason attended the 19 May meeting of the West German Dental Society held at Ramstein.

Farewell Parties

A unit farewell party was held in honour of the following members who are being rotated to Canada this summer:

Maj WK Dickie, Maj BA Gaudet, Maj Y Kamachi, FS Torrens CMB, Sgt Jermain EA, Sgt McCurdie HM, Sgt Wadden GM, Cpl McMillan SJ and Cpl Fringle JM.

Lt-Col Brick was tendered a unit farewell party at which time Maj Dickie on behalf of all members of the Unit presented him with a gift with the Black Forest motif.

A retirement party was held for Lt ES Moore, who will be returning to civilian life in August after more than 25 years with the Dental Corps.

Dent Det Cyprus

Clinic Accommodation

Capt DG Wilson, the DO with the Canadian Contingent in Cyprus, reports that the new clinic is "in excellent condition providing a comfortable working office despite the hot weather". Reporting on the new facilities in his monthly liaison letter, he stated that "the clinic and laboratory facilities are very adequate, approaching closely the standards in Canada".

Leave

Capt Wilson and Sgt Wilkinson travelled to Germany via a Canadian Yukon service flight.

Sports

Sgt Wilkinson was a winner in the doubles snooker competition in the Sergeants' Mess. (obviously, a mis-spent youth!)

Answer to "Flashback"

Date of photo - 1947. Place - Halifax

L to R back row - Pte Weaver DE, Sgt Moore GJ (recently ret'd Capt), SSgt Cartwright DG (serving Capt), WO2 Armstrong GM, Sgt Hussey T (recently ret'd), Sgt Cross AG (recently ret'd WO2).

L to R centre row - Cpl Gardiner DG, Unknown, Cpl Batten TL (serving WO1), Capt EP d'Entremont, Capt WA Shannon, Capt SG Bagnall (serving Col), Cpl MacDougall WD (recently ret's SSgt), Pte MacKenzie JC.

L to R front row - Cpl Hughes AJ (serving Sgt), Pte Marchand JF, Cpl Paquette TRC, Pte Wentzell JS (serving WO2).

In Memoriam

Canadian Forces Headquarters announced with regret the death of Major EW Gazo on 26 Jun 67.

Major Gazo enrolled as an Officer Cadet in the ROTP in 1956 and graduated from the University of Toronto with a DDS in 1960. He served in Trenton and Picton, Ontario before going to Germany with No 4 Fd Dent Coy in 1964. After his return to Canada he served in Ottawa and his last appointment was as Senior Dental Officer at the National Defence Medical Centre.

Major Gazo leaves his wife Pat and three children Stephen, Andrew and Michael. Deepest sympathy is extended from the RCDC to all members of his family.



A full military funeral was conducted from the Chapel at CFB Rockcliffe, with interment in Ottawa.

Professional Training

US Naval Dental School - Bethesda, Maryland, USA

Major	RE	Dyer	-	Periodontics	-	1 May-16 Jun 67
Capt	PR	McQueen	-	Periodontics	-	1-5 May 67

University of Michigan - Ann Arbor, Michigan, USA

Major	JOL	Bourget	-	Operative Dentistry	-	24 Apr-5 May 67
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Training

RCDC School - Canadian Forces Base Borden

Dental Laboratory Technician Level 6 - 8 May-23 Jun 67

Sgt Bleakney JC, Sgt Hughes AJ, Cpl Sabine-Pasley CStC

1 Dental Equipment Depot - Canadian Forces Base Petawawa

Conversion Course - 10 Apr-2 Jun 67

Sgt Posyluzny SD, Sgt Duve EA, LSgt Green BA, Cpl Longford MD, Cpl Strasdin JA

RCS of S - Canadian Forces Base Barriefield

Sr NCO Course - 19 Apr-30 May 67

Cpls Hardy DH, Garnham RA, Lindsay RS, Hill JF, Veinot RD, Gratton JR, Davies DJ, Wormington RC, Looker WB

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Cpls - Busse A, Parent TJ, Swiatkebich VH, Hache MJV, Gilkes BA; Ptes Clarke RM, Allain JG, Allen DG; LAW Acres CJ; AW2 Lamoyne BA

Promotions

To Major - JPA Legendre, CM Mason, DR O'Hara
To Capt - MB Fisk, ME Blasetti, DI Brown, DGJ Chausse, TM Clark, ED Cragg, JFD Cormier, DA Devine, RM Depledge, TJ Erskine, SJ Dion, YJA Gagnon, WA Gray, BLP Hart, NS Misura, CW Kearns, GL Lepage, JW Montgomery, HA Pankratz, WJ Percival, GRJ Pinsonneault, GC Post, TC Ringland, GJ Sharpe, RJ Shirkey, DA Stewart, GS Wilkins, BW Yates, JJ Jacques, WD Fiolek
To Lt - C Johnston
To Sgt - Ellis D, Wadden GM
To Cpl - Beauchamp, CJN, Mehler PJ, Vasek JJ

Retirements and Releases

Major PH Guevremont
Capts NA McFarlane, RW Chernesky, GE Purcell, A Van Ryssel, GA Johnson, MH Harch
WOL EB Morse
WO2 Young CA
SSgts Hodgkinson H, Ryder GP, Yeates JRC, Keogh GF
Sgt Vout AC
Cpl Clark JDW
Pte Bernard PB, Evans RV

Vital Statistics

Marriages

Capt JEG Joubert to Miss Laurence Leblanc, Capt TM Clark to Miss Susan Lea Morrow, Capt WD Fiolek to Miss Leona Sharon Starritt; Cpl RM Haiplik to Miss Gloria Hilda Yvonne Crocker, Cpl JGJ Labrosse to Miss Micheline Champagne, Cpl ZWJ Mitrikas to Miss Joan Elizabeth Patterson, Cpl RG Duffield to Miss Ann Maggs; Pte MJ Craig to Miss Victoria Carolyn Zakotuk; Pte EAJ Morin to Miss Cecile Anne Marie Deveau; Pte JMM Arbour to Miss Bernice Marie Ronsome; Miss MC Gareau to Mr S Madore; Miss MA MacWilliam to F/L EE Osler.

Births

Son - Maj & Mrs HJ Marion; Capt & Mrs GDU Dippel; Capt & Mrs JML Rochefort; Sgt & Mrs HC King; Cpl & Mrs NB Sharp; Cpl & Mrs GM Anderson; Cpl & Mrs TR O'Mara; Pte & Mrs J Vanhemert.

Daughter - Capt & Mrs ICM Wambara; Cpl & Mrs PJ Armstrong; Cpl & Mrs CSTC Sabine-Pasley; Cpl & Mrs DH McKay, Cpl & Mrs BF Hannah

Deaths

Canadian Forces Headquarters announced with regret the death in hospital of Major EW Gazo June 26, 1967.

* CORPS MEMBERS ARE REMINDED THAT THE ANNUAL RCDC GOLF TOURNAMENT WILL BE HELD AT CAMP BORDEN 22-23 SEP 66.

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Quarterly

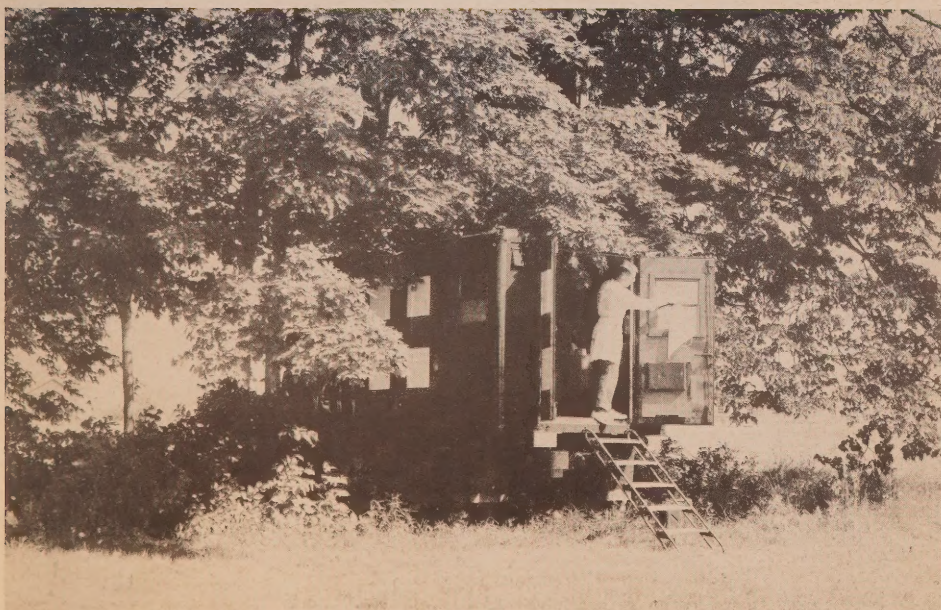


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Cover Photograph

Third Phase DOTP "in the field"
Meaford, Ontario, July 1967

A VISIT TO REMEMBER

Lt-Col JC Brick, CD, DDS



1967 is a year of anniversaries of famous battles and battlefields in Europe. This spring saw the fiftieth anniversary of the Battles of Verdun, Vimy Ridge, Passchendaele and other familiar names of the First World War. In August, Canadians revisited the scene of the Dieppe Raid on the occasion of its 25th anniversary.

The ceremonies were attended by an official party representing the Canadian Government; a Department of Veterans Affairs group consisting mainly of a member from each of the units that took part in the raid; and forty-five Regular Force personnel, whose group was labelled the "Serving Survivors Contingent". In addition many regimental associations chartered planes and brought more than one hundred other veterans of the raid back to the scene.

The author, as a former officer of the Essex Scottish Regiment, now Senior Staff Officer Dental in HQ Mobile Command, was a member of the Serving Survivor Contingent.

The Contingent gathered at CFB Trenton and flew directly to Paris. At Orly Airport the French Air Force and Army provided buses and staff cars to transport the group to Dieppe. High above Dieppe, on the road to Rouen, a tent city sprang into being. This was to be the home of the Survivors. The 2nd Battalion Princess Patricia's Canadian Light Infantry were our hosts. As they provided a guard of honour, one hundred strong, they came equipped with kitchens, messes, and the staff required for a small field operation such as this.

Unfortunately the PPCLI could not control the weather or change the fact that the camp site had been very recently used as a cow pasture. Preceding the ceremonies a briefing took place in the new Casino. The original Casino was a unit objective in the raid and was totally destroyed.

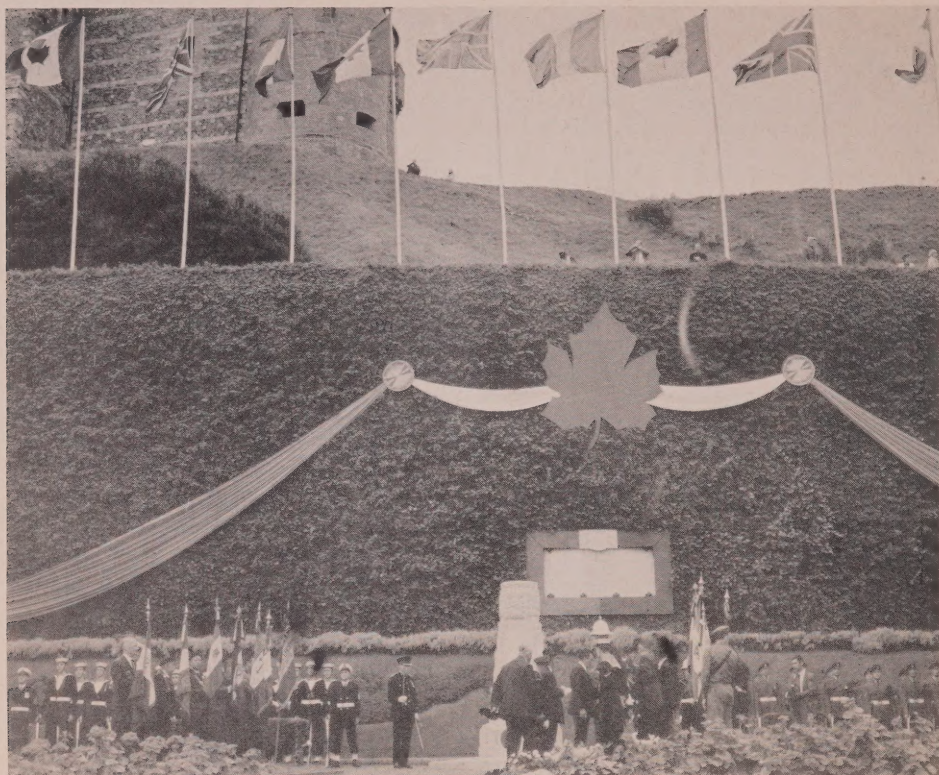
The ceremonies began at 1830 hours on 18 August on the Esplanade. The Guard of Honour from the PPCLI and their Corps of Drums paraded for Retreat and a Feu-de-Joie. Remembering the shambles of the beaches and the Esplanade on the original visit, the sight of this well turned out, precise, body of Canadian troops brought a feeling of pride for our Canadian Forces.

At 2100 hours a Night Watch took place in the cemetery. This moving ceremony has taken place every August 18th since 1945. It is staged by the citizens of Dieppe. Sentries are posted around the cemetery and a torch party arrives and lights the avenues between the graves. Prayers of honour and thanksgiving take place and the torches are extinguished one at a time to leave the area in quiet and darkness once again.

On the actual anniversary day of the raid, the 19th, a Canadian memorial service was held in the cemetery. This was followed by wreath laying ceremonies at the many regimental memorials erected along the beaches to honour Les Fusiliers Mont-Royal, the Royal Hamilton Light Infantry, the Calgary Tank Regiment and the South Saskatchewan Regiment, to name but a few.

After these individual memorial ceremonies, all units reformed and paraded to

Canada Square. Lord Louis Mountbatten, former Chief of Combined Operations, placed a wreath on the main Canadian cenotaph.



Canada Square, shown in this photograph is at the base of one of Dieppe's characteristic cliffs which proved to be the downfall of the sea-land operation.

At the conclusion of this ceremony, during a minute of silence, three Dakota aircraft of No 1 Air Division RCAF from Lahr Germany dropped 10,000 poppies over Canada Square and along the beaches.

The military ceremonies concluded with a march past with Lord Mountbatten taking the salute on behalf of all representatives on the dias with him; including those from the French Government, Canada and Great Britain, and those from the Navy, Army, Air Force and Royal Marines.

The parade wound up the narrow streets of Dieppe. It is a small city but in mid August it is a very large tourist resort. The streets were jammed and on several occasions the parade was halted by the cheering throngs. Flowers were strewn along the route and rained from balconies. Many of the older citizens, themselves survivors of the raid, hung flowers on the troops and marched along with them. It was a moving sight to see blind men marching hand in hand with a buddy, to see men with artificial limbs striding with the band. Twenty-five years had not dimmed their courage.

Following the march past and parade, a reception was given, with the Canadian Government as the host, for all who took part in the ceremonies and for the citizens of Dieppe in general.

The day concluded with a Son et Lumière at 2200 hours. In the darkness there were thousands of people along the beaches, waiting. Out in the channel a red glow of dawn started to show. The music was from Beethoven's Fifth Symphony, starting with his resounding V for victory chord. Suddenly in the Puis area rockets are fired from the sea to shore, then the beaches at Pourville waken, and finally the shore line of Dieppe bursts into flame and explosions. The defences reply with the most thunderous, explosive rockets ever heard. The music swells and a commentator calls the Units by name as they land. The Churchill tanks of the Calgary Regiment appear, outlined in fireworks, each in turn exploding and burning. Then with one final indescribable explosion the fireworks stop, the music dies and the people leave. The beach is shrouded in smoke, the tank outlines are burning and all becomes quiet again.

Fortunately the realism stopped here. There was no trek to the top of the hill or to the prison camps. France and the Citizens of Dieppe paid a great tribute to the Canadian Forces and to the members of the Royal Navy, Royal Air Force and the Royal Marines who took part in the raid. It was a most memorable and moving occasion.

SERVICEMAN PARTICIPATION STUDY

Major JVP Chatwin, CD, DDS, DDPH



In May of 1965 a pilot study was conducted which involved a random sampling of the dental records in 19 selected clinics across Canada involving approximately 38% of the total strength of the Canadian Forces. The dental records of 3421 of these 46,460 servicemen were examined.

The aim of this study was to determine the extent to which the service population participates in the Service treatment facility.

The results showed that 85.50% of the patient commitment received dental coverage of a varying degree and that 63.72% received good or adequate dental treatment. In reporting this work Harrington¹ suggested that an unknown degree of bias existed in clinic selection. In order to eliminate this bias and to check the pilot study results a definitive study was conducted in January and February 1967 with the aim as defined for the pilot study.

Method

All 137 full-time and 49 part-time clinics covering the total Service population in Canada, Europe and with the United Nations Emergency Force in Egypt were involved.

At each clinic permanent dental treatment records, the DND 422, were checked and all those with the last digit of the service number ending in 3, this number being chosen by chance, were drawn to form the random sample. The pilot study had service numbers ending in 5.

For the purposes of this study, the same terms of reference used in the pilot study were applied and the rating recorded by clinic on a proforma.

1. Treatment definition

a. Regular Treatment

This patient visits the dental clinic routinely whether for examination, consultation, prophylaxis, Sn F₂, or other dental requirements and has the necessary work completed. Over the years he is interested in his oral health.

b. Intermittent Treatment

This patient goes to the clinic probably less than once a year, not counting emergency treatment, and has some of the necessary work completed. There may be a lapse of one or more years between visits but his mouth is not considered to be completely neglected. The visits are generally proportionate to the patient's requirement.

c. Emergency Treatment

This patient visits the dental clinic as a result of neglect, but after receiving treatment for any particular complaint does not return until another emergency arises. He uses the dental facilities for relief of pain and avoids dental treatment unless he has a complaint.

d. Nil Treatment

This patient's record shows only an examination on entry, indicating that he has avoided treatment during his service career to date.

2. Terms of reference for sample selection

- a. Personnel must have at least one year of military service.
- b. Age or rank is not a factor.
- c. Treatment started after examination on release will not be counted.
- d. If for any reason there is difficulty in making the choice of a specific category for a selected chart, it will be recorded in the next lower group.

3. Proforma for Dental Treatment Study

Clinic Location	
Station Strength	
Regular Treatment	
Intermittent Treatment	
Emergency Treatment	
Nil Treatment	
Total No of Charts Recorded	

Findings

With a population of 102,027 servicemen, charts were examined for a new sample, size 9352, with service numbers ending in 3, i.e. 9.17% of the group. The findings are shown below with the pilot study results included for comparison.

Category of Treatment	1967		1965	
	Number of charts selected	Percentage	Number of charts selected	Percentage
Regular Treatment	3028	32.38%	1105	32.30%
Intermittent Treatment	3184	34.04%	1075	31.42%
Emergency Treatment	1931	20.65%	745	21.78%
Nil Treatment	1209	12.93%	496	14.50%
Total No of Charts Recorded	9352	100.00%	3421	100.00%

Discussion

From the statistics presented no significant variation is noted between the pilot study and the present returns embracing the whole Service population while excluding all those who were in the pilot study sample.

In discussing the pilot study results, the author noted that it showed 85.5% of the RCDC patient commitment received dental coverage of a varying degree and that 63.72% received good or adequate dental treatment. The 1967 study shows 87.98% and 66.43% respectively. With the continued emphasis on dental health education in the Service it is anticipated that future studies will reflect this trend.

Reference

1. Harrington, W.H. Dental treatment study - patient participation. The RCDC Quarterly 6:4, Jan 1966. p.17.

Biographical Sketch

Maj PL Griffiths CD

CO 1 Dent Eqpt Dep



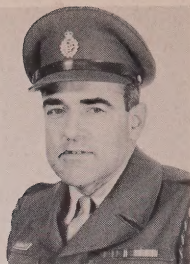
Major Griffiths served with the Royal Navy (Fleet Air Arm) from 1942-46. He joined the Canadian Army in 1949 and was commissioned RCOC in 1952, subsequently holding quartermaster, depot and staff appointments in Canada and Europe. In 1963 he was appointed logistics officer at ONUC HQ Congo and in late 1964 served with the UN Force in Cyprus. In 1965, after attending IBM courses on computer orientation, flow charting and systems analysis, he became a member of a CFHQ project team designing supply procedures for computer application. He was appointed CO 12 ROD Halifax in 1966 and later Base Supply Officer as integration progressed.

In July this year he transferred to the RCDC and in August was appointed CO No 1 Dental Equipment Depot, CFB Petawawa.

Welcome to the Corps!

PORCELAIN FUSED TO GOLD

Major D.E. McDermott, CD, DDS



Introduction

The advent of new techniques for fusing porcelain to gold and of securing life-like shading is now a reality. Glazed porcelain has long been recognized as the material of choice for full and jacket crowns and for fixed partial dentures. It is compatible with the tissues, will neither discolour nor erode and it is impervious to oral fluids. It is the most benign material to the tissues that can be used in the mouth. But in spite of these advantages there has been a reluctance to use it because of its fragility. That reason is no longer valid. Porcelain fused to gold provides a restoration that is superior to either gold or porcelain used alone.

Characteristics

There are many porcelain fused to gold materials on the market such as Ceramco, Micro Bond, Nobil Bond, etc. The basic key to all of them is the compatibility of the porcelain to the metal in terms of linear coefficient of thermal expansion. Each company rigidly matches its metal to porcelain and vice versa; thus the metal of one company should never be used with the porcelain of another, and to do so is to invite serious problems.

The ability of the porcelain to bond itself to the gold has been achieved, as stated, primarily by matching the linear coefficients of thermal expansion of the two materials. The bond between the porcelain and gold is mainly the result of a chemical and wetting reaction. The mechanical bond obtained plays only a minor role, hence no mechanical retention or undercutting of the gold is necessary. The coefficient of expansion of the porcelain has deliberately been made slightly lower than that of the metal so that the porcelain is in a slight state of compression. This is an important factor to remember when designing jacket crowns and bridges. Porcelain is in its strongest state when it is in a state of compression and restorations should be fabricated to take advantage of this property. To disregard it is to invite failure. The whole concept of fusing porcelain to gold was founded on the principle that the porcelain gains its maximum strength when surrounding a cylindrical metal form. To illustrate this point, picture the hand surrounding a round pole; if the hand completely surrounds the pole a strong grip can be attained, but the less the hand is able to wrap around the pole the weaker the grip becomes. Similarly, porcelain more completely surrounding the metal creates a stronger bond. For this reason porcelain veneers are liable to become a problem unless the porcelain is carried over the incisal edge onto the lingual.

Another factor to consider is that of deformation of the metal. When the occlusal surface is gold and the buccal or labial facing is porcelain, fracture is likely because of the elasticity of the gold. Over a period of time, as the bite imposes on the metal, a strain is set up which could eventually fracture or "pop out" the veneer. Most readers will have difficulty in accepting this concept, as the occlusion is traditionally in metal. However, with porcelain fused to gold the strength of the restoration is actually increased. For the reasons outlined, with the occlusion in porcelain there is far less chance of failure than with a metal occlusal/incisal

surface and a porcelain veneer facing. Using high speed equipment the porcelain can be quickly adjusted in the mouth and the glaze recovered by refiring.

Tooth Preparation

The procedures outlined in this article are offered only as a guide. In the last analysis only the dentist concerned can determine which preparation procedures are best suited to each individual case.

The preferred preparation for porcelain fused to gold is the "chamfered shoulder preparation". Figures 1 and 2 show the prepared tooth with a cross sectional view of the gold porcelain relationship.

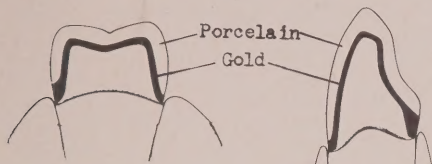


Fig 1

Fig 2



Fig 3

Note Fig 3 - Course cut diamond for bulk reduction and fine cut to finish subgingivally.

The following features should be noted:

1. a minimum of $1\frac{1}{2}$ mm of the tooth structure must be removed circumferentially;
2. a minimum of 2 mm must be removed occlusally or incisally.

This will ensure an adequate thickness of gold and porcelain for maximum strength and esthetics. There should be a definite subgingival finishing line around the tooth and the final form should taper slightly on all surfaces towards the occlusal or incisal. This operator prefers to do the entire preparation using a high speed handpiece with a round end pencil diamond stone as illustrated in Fig 3. The noteworthy feature here is that all bulk reduction is done with a course grit diamond stone, then finishing subgingivally and rounding off corners with a fine grit diamond stone. The diamonds used are Densco Blue White Friction Grip Shank, #'s FLDT - Fine and F2DT - Coarse. Fine grit diamonds should only be used for finishing, otherwise they quickly show signs of wear.

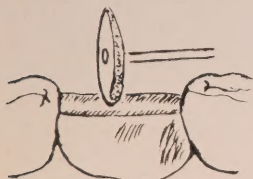


Fig 4



Fig 5

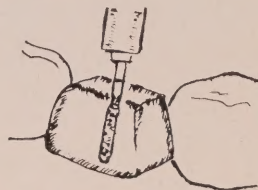


Fig 6

Note: Fig 4 - Gross reduction using wheel stone in straight handpiece

Fig 6 - Reduction circumferentially with coarse cut diamond

Finishing and subgingival preparation with fine cut diamond

Occlusal reduction for posterior teeth is accomplished by using a wheel stone in the straight handpiece (Fig 4). The occlusal form and outline can almost be completed with this stone. Again the circumferential reduction is done with a coarse F2DT diamond. The occlusal resistance form and rounding of sharp corners is done with the same stone (Fig 5) and the preparation finished sub-gingivally with the FLDT (Fig 6). The preparations are then sanded with fine-grit sandpaper discs preparatory to impression taking. It is imperative that there be no undercuts, and if doing bridge work the

abutment preparations must be parallel. It is again emphasized that there must be a minimum reduction of $1\frac{1}{2}$ mm's circumferentially and 2 mm's occlusally, otherwise a bulky and protrusive restoration could result. In areas where these tolerances cannot be achieved porcelain veneers are contra-indicated. When dealing with cases in which the clinical crowns are too short to permit a 2 mm clearance, the occlusal surface must be finished with metal, and porcelain is used circumferentially.

Some Pitfalls and Their Causes

1. Checking and breaking of the porcelain veneer on insertion or within a short time may be attributed to one or more of the following causes:

- a. undercut preparation,
- b. lack of parallelism,
- c. insufficient tooth removal,
- d. faulty impression,
- e. corners of preparation not rounded.

When gold-acrylic veneer crowns are used as abutments they may be snapped into place and the strain created may not show immediately. The acrylic facing may discolour or "pop", but this may not occur for quite some time due to the elasticity of the acrylic. However, the porcelain-gold combination has no elasticity and will not go over non-parallel abutments and undercuts without checking or breaking.

Breakage may also be caused by poor fabrication on the technician's part. A strong restoration cannot be achieved through bulk of porcelain. The metal understructure must be built to match the tooth contour, and then the porcelain is baked to the metal as evenly as possible. There can be no sharp corners or edges on the metal to create shearing problems during mastication. Areas of porcelain bulk should be avoided since masticatory stresses will shear porcelain from porcelain instead of transmitting the shock through the porcelain to the metal beneath (Fig 7). This is particularly true when using porcelain-gold pontics. There is a tendency to use less gold and more porcelain, thereby inviting this shearing problem. Then too, when the gold is non-rigid, flexion will cause the porcelain to crack.



Fig 7

2. Impact Shock - When the porcelain cracks because of a sudden blow, it can be repaired by removing the crown from the mouth, grinding a "V" shaped trough along the crack, filling it with porcelain and refiring the crown.

Normally three to four firings are required to fabricate a crown. However, the two materials are so manufactured that they can be fired together five, six and possibly seven times before they lose their stability.

3. Post Insertion Corrections - Often after a crown or bridge has been fired to a natural glaze (approx 1800°F) and is ready for final insertion, the operator may wish to add to or emphasize a contour. This can be done by using a lower fusing porcelain (approx 1600°F) adding it to the area required and refiring to a glaze. In this case, care must be taken that the 1800°F glaze is not abraded because it will not reglaze at the lower firing temperature.

Summary

The progress of restorative dentistry is such that the practitioner can no longer be satisfied with a restoration that merely restores function. He should insist, and indeed patients are insisting, that the prosthesis have a vital, natural appearance. Porcelain fused to gold properly utilized comes closer than any other material to realizing this objective.

The following key points must be kept in mind when preparing porcelain fused

to gold restorations:

- a. the crown or bridge should be designed so that excessive porcelain bulk is avoided - never more than $1\frac{1}{2}$ mm labially or buccally and 2 mm occlusally;
- b. labial or buccal porcelain areas must be convex, avoiding boxing or concavities;
- c. sharp points, corners or angles on the porcelain bearing surface must be eliminated;
- d. full coverage porcelain is ideal, but a veneer bonded to a rounded convex surface can give many years of service if properly designed;
- e. thick and thin areas of porcelain should be avoided;
- f. repeated firings with concomitant expansion and contraction can cause cracking;
- g. metal thickness must be no thinner than .3 mm in crown work, and if the restoration is a multiple bridge .4 mm is minimal;
- h. preparations must be as smooth and free from projections as possible to avoid fracture of the porcelain on cementation.

* Editor's Note

From the period 17-21 Jul 67 a team consisting of Col JW Turner, Maj DE McDermott, Maj AG Taylor and Sgt Rothwell KS visited the JF Jelenko Company at New Rochelle, N.Y. The purpose of the visit was to orientate and familiarize RDCD personnel with research and development associated with the porcelain bonded to gold technique. An ever increasing interest in this technique prompted the publication of articles by Maj McDermott and Sgt Rothwell in this issue of the Quarterly.

TECHNICAL LABORATORY CONSIDERATIONS IN FABRICATING
PORCELAIN BONDED TO GOLD PROSTHESES

Sgt KS Rothwell, CD



Introduction

The many advantages of glazed porcelain as a restorative material have long been recognized. Its compatibility with tissue, its natural vital appearance, its non-porosity and colour stability are among these advantages; the only outstanding disadvantage being its fragility. During the past ten years research has made strides in the process of bonding porcelain to gold, thereby overcoming this disadvantage. The combination of porcelain bonded to gold now enables the fabrication of a restoration with all of the esthetic advantages of porcelain, plus the assurance of strength, fit and durability of gold.

This article deals with the technical laboratory considerations of this technique.

Accommodation

Ideally the ceramic department of a laboratory should be a separate room, free of contamination from metal, acrylic grindings and dust. All instruments and tools used in the adapting and firing of porcelain must be kept scrupulously clean. Any foreign particles introduced into the porcelain will cause bubbles and voids and may cause a failure in the glazing process. The waxing, investing and casting of the gold may be fabricated in the existing laboratory facilities.

Equipment

Specialized equipment is necessary, however, the broken arm centrifugal machine can be used in conjunction with a torch burning a mixture of oxygen and either natural gas or propane. Acetylene alone will not give the required heat, nor will a mixture of air and natural gas or propane. Acetylene and oxygen combinations will overheat the gold very rapidly and will carbonize the metal.

A special oven is required because the mold temperature for burnout is approximately 1300°F. However, after the casting is made, it is advisable to return it to the oven at 1200°F and raise the temperature to 1925°F to decontaminate and degas the metal.

A porcelain furnace is also required. This furnace must be capable of rising from 1200°F to 1800°F in approximately six minutes. A vacuum attachment to the furnace will produce a denser porcelain and will lessen the possibility of porosity.

A small bench-type sand blaster using a quartz abrasive is most useful for removing oxides from the gold. It will also clean and shine gold without any surface loss.

The only other equipment required consists of hand instruments for adapting the porcelain, sable hair brushes, and a dental engine and handpiece with stones for trimming and shaping the porcelain.

Materials

Investments - Special high heat investments are essential. These investments do not mix as readily as a plaster-bond investment and therefore should be spatulated more thoroughly. Complete instructions for mixing are supplied by the manufacturers and should be followed closely.

Gold Alloys - High heat gold alloys must be used for casting restorations that are to receive porcelain. High heat solders are also necessary. It is of interest to compare the heats required to process porcelain bonded to gold. Porcelain glazes at approximately 1800°F. As the solder joints of a fixed partial denture have to withstand this heat, the solder used is in the 2000°F to 2100°F range. The gold itself melts at approximately 2300°F. The comparable figure for melting conventional gold in normal fixed partial denture prostheses is approximately 1700°F. A metal conditioner, which is in fact a compound of 24K gold, is fused to the areas of the casting which will be bonded to the porcelain. This conditioner aids considerably in the colour control of the porcelain.

Porcelain Powders - The porcelain powders are divided into four groups.

- a. Opaque Porcelain - This first application of porcelain has a three-fold purpose. It masks out the colour of the underlying gold, it compliments the gingival shade, and its fusing power joins the porcelain to the gold in a powerful bond. This opaque porcelain should have a thickness of 1/3 mm after firing.
- b. Gingival or Body Porcelain - This makes up the majority of the bulk of

porcelain, and has to be carefully built up and over-contoured by approximately one-third of the required size to compensate for the considerable shrinkage which takes place during firing. The gingival powders are supplied in a variety of natural tooth shades and hues.

- c. Incisal Porcelain - The third group used is the incisal shade, and this can be applied with a sable hair brush to the prepared body of the gingival porcelain.
- d. Modifiers - The final group of porcelain powders consists of the modifiers. These are strong, basic colours that can be used to create slight colour differences to the regular shades.

Techniques

Casting Techniques - A separate crucible must be kept for the gold, as this special alloy does not contain copper. This gold must not come into contact with even trace elements of conventional gold which do contain copper because the presence of copper, even in the minutest amount, will cause the porcelain to turn green. Flux should not be used during the melting and casting procedure. The alloy is not quite as fluid as regular crown and bridge gold, therefore an extra turn should be put on the spring of the casting machine to give a little more casting force.

Sprueing - The high heat used to melt the gold causes more gas formation. If regular sprueing is used, porosity and incomplete castings will be encountered. Techniques used to overcome these difficulties include much larger sprues, 10 gauge in place of the conventional 14 gauge, and a system of vents from the casting. This allows the gases to escape more quickly than through the porosity of the investment.

Porcelain Technique - The porcelain powders are mixed with distilled water to a workable putty-like consistency that can be adapted and shaped with either sable brushes or hand instruments. The porcelain is then fired, trimmed with stones, added to and re-fired until the correct shape, occlusion and contact of the restoration is obtained. As many as five separate firings may be made without deterioration of the porcelain. The final step is to fire a glaze to the restoration, which seals the surface of the porcelain with a fine film of glass which is impervious to oral fluids and will ensure maximum tissue tolerance.

Crown Design

The design of the gold casting is very important. It is emphasized that the underlying gold must have a minimum thickness of 0.4 mm (26 gauge). A thin diaphragm of gold which has any flexibility will defeat the purpose, i.e. instead of adding strength to the porcelain, it will considerably weaken it.



Fig 1

Veneer

The porcelain bearing surface is convex. The gold incisal edge is thick and rounded.

Anteriors



Fig 2

Full Coverage

Crowns which will be connected have the reinforcing lingual shoulder extended to form the contact point.

Researchers theorize that a chemical bond is formed between the metal and porcelain, thereby eliminating the necessity for providing retentive features within the gold crown. Any sharp angles or undercuts in the gold will weaken the bond. Undercuts, loops and angles, which are so necessary to retain acrylic to gold, only act as wedges and chisel edges to the porcelain.

Incisal edges of anteriors should not be protected by gold. Occlusal surfaces of posteriors are stronger when formed by porcelain and will wear better than gold. The normal fragility of porcelain stems from torque and oblique stresses which are imposed on it. Figures one to four illustrate some basic designs used for porcelain bonded to gold restorations.

Posteriors

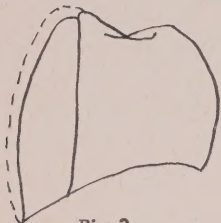


Fig 3

Veneer

The porcelain bearing surface is always convex - no boxing or undercuts for retention. The porcelain is carried to the buccal-occlusal area ending in a rounded joint.

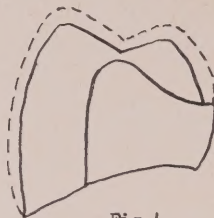


Fig 4

Full Coverage

The lingual shoulder is extended mesially and distally to provide connecting points as close to the occlusal surface as esthetics allow.

These basic designs can be adapted and used for most porcelain bonded to gold restorations including pontics for fixed partial dentures.

Conclusion

It should be pointed out that processing ceramic restorations calls for much skill on the part of the technician. He has to be extremely adept in the shaping, firing and trimming of the porcelain to correct dimensions. He also has to be able to blend shades and modifiers, both gingivally and incisally to a high degree of colour accuracy. This is a skill within the dental laboratory technicians' trade which is unique and the technician highly proficient in this art is called a "ceramist".

"I think there should be a new petition in the litany to be read in hospital chapels or wherever doctors and nurses do, or ought to, congregate. It might be as follows:

'From inability to let well alone; from too much zeal for the new and contempt for what is old; from putting knowledge before wisdom, science before art, and cleverness before common sense; from treating patients as cases, and from making the cure of the disease more grievous than the endurance of the same, Good Lord, deliver us.'"

- From a paper delivered at the Fourth Meeting of the Australian and New Zealand Society of Oral Surgeons, Sydney, February 24, 1966, by Sir Arthur Amies, C.M.G. - Austral. J. Dent. 11:223, Aug., 1966.

PERIODONTAL DISEASE AND ORAL HYGIENE

Major RE Dyer, CD, DDS



Periodontal disease is a complex entity the aetiology of which involves systemic, local and environmental factors which are inextricably interwoven. Inherent with these factors are body responses to the destruction and repair of tissues. It is recognized that debris is a forerunner of gingival disease of an inflammatory nature.¹ The importance of this debris cannot be underestimated, but it would be erroneous to state that its removal is the only requirement for the control and prevention of periodontal disease.

Types of Debris

The debris involved in periodontal disease may be classified into three types:

1. Plaque, in its initial stages is not visible to the naked eye without the use of disclosing solutions or tablets. In a large build up, it is visible as a semi-transparent coating on the teeth. It is a gel-like mat which traps bacteria and exfoliated cells, and is capable of concentrating calcium from two to twenty times that found in saliva. Plaque is the most destructive type of oral debris.
2. Materia alba, is a soft white deposit which clings to the teeth and gingivae, and also to the dental plaque.² It too is a base for large accumulations of bacteria and exfoliated cells.
3. Food debris, consisting of particles of food accumulates between the teeth as a result of food impaction and caries, and large pieces of food lodge in the interproximal spaces and other sheltered areas.

It is important to note that food for the bacteria of the plaque and materia alba is supplied in part by food debris and in part by organic substances produced by the body. In the case of body produced substances the supply is continuous, day and night, and therefore this source of toxic waste is ever present.

Development of Periodontal Disease

The first stage of periodontal disease is gingival inflammation which is characterized by:

- a. loss of stippling
- b. edema
- c. changes in tissue tone
- d. changes in gingival colour

These changes occur first in the papillary tissues, later involving the tissue of the entire gingival crevice.

As the inflammation increases, proteolytic enzymes produced by the bacteria and neutrophil leukocytes of the body⁴ dissolve connective tissue fibers. The result is destruction of the gingival fibers apical to the gingival crevice and the periodontal ligament becomes involved. Gingivitis has now become periodontitis. Continued

inflammation results in apical movement of the periodontal ligament and pocket formation begins. Bacterial plaque flourishes in pocket areas because it is impossible for the patient to reach these protected areas with any mechanical means of cleansing. The by-products of the plaque, coupled with the body's response to inflammation, attacks the bone of the alveolar crest. Inflammation spreads through the bone via the blood vessels with resulting bone loss, and if it continues unchecked, destruction of the periodontal ligament and alveolar bone progresses until the teeth are lost.

It should be noted that calcified deposits on the teeth are not the direct cause of pocket formation. However, calculus is a mechanical irritant which causes the tissues to bleed, thus supplying nutrient to the bacterial plaque which lies on the surface of the teeth or on the surface of the calculus and is in close apposition to the inflamed walls of the pocket.

Preventive Periodontics

"Preventive periodontics includes the development and application of procedures which will promote oral health and interfere with the initiation and/or extension of periodontal disease."⁵ Many studies have shown that a careful thorough system of home care can retard or eliminate⁶ gingival disease. In advanced cases of periodontal disease, a state of oral health can be successfully maintained following therapeutic procedures by an adequate program of home care.⁷

The objectives of home oral hygiene are as follows:

- a. prevent formation of calculus;
- b. removal of bacterial plaque, materia alba and food debris;
- c. maintenance of gingival contour, tone and circulation;
- d. promote keratinization of the gingival tissue to resist mechanical or bacterial injury.⁸

Probably the device most used to achieve these ends is the tooth brush.⁹

Type of Tooth Brush

A recommended tooth brush is one which meets the following requirements:

- a. a firm handled brush about six inches in length;
- b. the brush head should be about one inch in length with the brushing surface in a flat plane;
- c. both natural and synthetic bristles are acceptable;⁵
- d. two or three rows of widely spaced hard bristles, or alternatively, soft bristles closely spaced and multitufted.

Method of Brushing

There are many prescribed methods of tooth brushing.¹⁰ Two of these are favoured by the author.

- a. Modified Stillman - The brush is placed at a forty-five degree angle to the long axis of the teeth with the bristles pointed in an apical direction. Pressure is applied laterally against the gingivae causing blanching. The entire brush is then moved coronally to remove loose debris from the teeth.
- b. Charter's Method - The brush is placed at a forty-five degree angle to the long axis of the teeth with the bristles pointing in a coronal direction. Pressure is applied in combination with a slight rotary movement without shifting the position of the brush. This procedure is repeated until every surface of all teeth have been brushed. The occlusal surfaces are brushed by forcing the tips of the bristles into the pits and fissures of the posterior

teeth.

The combination of the two outlined methods of manual brushing have proved most effective in clinical practice. However, for people who are physically or mentally handicapped the standard motions of the electric tooth brush may result in more frequent and better cleansing of the teeth and gingivae.^{11,12}

It should be noted that each tooth has five surfaces and only three of them are readily accessible to the tooth brush. The remaining two (i.e. the interproximal areas) may require an adjunct to the tooth brush to be properly cleansed.⁶

Interproximal Cleansing

There are many materials available for interproximal cleansing such as dental floss, dental tape, gauze bandage, etc. In a carefully controlled research program carried out by Altman and Stout¹³ at Bethesda Naval Dental School, dental floss and three ply nylon baby yarn were tested as interproximal cleansers. The dental floss and nylon baby yarn were used according to the flossing principles laid down by Bass.¹⁴ Their findings are summarized as follows:

1. 33% of the people tested were able to maintain a plaque free tooth surface with only a tooth brush.
2. When dental floss was added to the prescribed procedures the percentage rose to 49%.
3. When nylon baby yarn was substituted for the dental floss the percentage rose to 69%. However, nylon yarn had the disadvantage of breaking where tooth contacts were tight.

It is readily apparent that a flossing technique, using either dental floss or nylon baby yarn, is a necessary procedure for some 16% to 36% of patients.

Other Cleansing Devices

There are many other adjuncts on the market today, all or some of which are of value to patients in maintaining oral hygiene if properly used.

a. Interdental stimulators

- rubber type
- stimulents

These agents are employed for cleaning the interdental areas, massage of the papillary tissues, and stimulation of the lymphatics permitting edematous products and bacterial toxins to drain from the inflamed area.

b. Anti-calculus materials^{15,5}

These materials include enzymes, chelating agents, anti-microbial agents and substances such as urea. They are incorporated into dentifrices, chewing gum, mouth washes, etc. There is considerable research literature on these materials, however, their use is largely on an experimental basis in the hands of trained researchers.

c. Water pressure devices¹⁶

Recently there has been renewed interest in water irrigation devices to improve oral hygiene. Contrary to the advertising claims these devices do not remove plaque, however, they are effective in removing materia alba and

food debris. They are most useful for patients wearing orthodontic appliances. Where periodontal disease is present and pockets have formed, the surface tissues are improved but there is no lessening of the inflammatory process in the deeper tissues.¹⁷ In spite of some advertisements, this device is not a substitute for the surgical removal of the periodontal pocket.¹⁸

One of the problems facing dental researchers is the determination of the most effective pressure to be used on diseased tissue and on healthy tissue. That these two pressures will vary is readily understood, and any pressure which causes pain is actually irritating or tearing tissue. The matter of optimum pressures must be resolved since there are increasing reports of tissue damage as these devices are taken up by the general public. Until the limitations of these devices are fully understood and optimum pressures established, caution should be exercised in recommending their use to patients.

Conclusion

It is stressed that the method of oral hygiene must be tailored to the patient's requirements. The method will also depend upon his oral health, his manual dexterity, and above all his ability and desire to learn and follow a prescribed procedure.⁵ Indeed, patient motivation and ability is of supreme importance, for the use of gingival surgery is only indicated if inaccessible areas (pockets) are thereby made accessible to good oral "hygiene" practices.¹⁹ The continuing success of treatment is largely determined by the patient's ability and desire to co-operate in the plan undertaken.

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The RCDC News

Division News

Visits and Inspections

Brig BP Kearney visited The RCDC School on 3 Aug to attend the marching-out parade for the DOTP candidates and the various functions associated with that occasion.

In October the Director General inspected dental facilities within 35 Field Dental Unit and in conjunction with this visit attended the USAEUR Dental Training Conference in Garmisch, Germany, 5-7 Oct.

Col IG Craigie, Lt-Col WR Thompson and Maj CA Casterton visited No's 11 and 14 Dental Units during October to familiarize RCDC personnel with current trades training policies.

Staff Changes

During this quarter a number of changes in staff have occurred within the Division.

- Maj CA Casterton was seconded to DFCAS/DOM where in addition to his present duties as career manager for RCDC officers and men he will be responsible for chaplains as well.

- Maj JW Fletcher was posted into the Division pending the retirement of Lt-Col AW Brusso, Senior Procurement Officer for the Corps.

- SSgt James MA arrived following his tour of duty with 4 Fd Dent Coy in Germany.

FIFTH ANNUAL RCDC GOLF TOURNAMENT

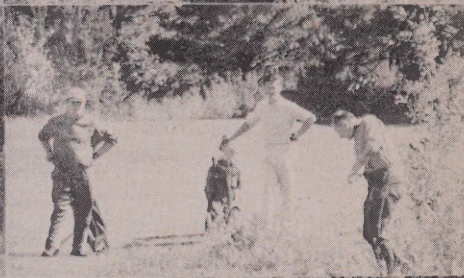
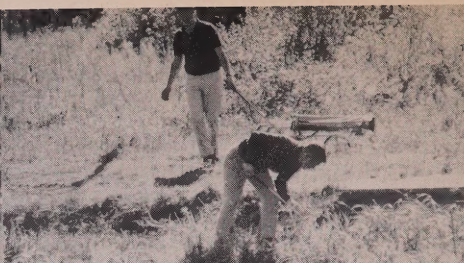
The Annual Golf Tournament is an event which is relished with keen anticipation by a large percentage of Corps members. The RCDC School continued the tradition of the past five years and hosted the Tournament at the Circled Pine Golf Club, CFB Borden 22-23 Sep 67.

Seventy-two golfers representing all Canadian based RCDC units participated in the two-day competition. Seven units competed for the Officers' Trophy for team play which was won by 15 Dental Unit.



Brig BP Kearney presents the RCDC(R) Officers' Trophy for Team competition to winning team from 15 Dental Unit

l to r - Lt-Col WH Carter, (Brig Kearney) Maj JFA Marcil and Capt CW Kearns



Some of the action - Fifth Annual Golf Tournament - 1967



Upper left - Brig KM Baird (ret'd) presents the KM Baird Trophy for Tournament low net for 36 holes to Lt-Col WH Carter whose score was 167.

Upper right - Col Covey (right) presents the GR Covey Trophy for low net for 18 holes to Maj JFA Marcil. His score - 82.



Lower right - Maj AG Taylor (right) presents the prize for tournament low net to Sgt Shergold KJ (145½).

A total of 24 prizes were awarded including one for the "most honest golfer" to Maj JL Craig (284).

On the final evening 95 members of the Corps attended the banquet and presentation of prizes and awards.

Staff members of the RCDC School are to be congratulated on their superb effort in organizing the Tournament again this year.

11 Dent Unit

Special Events

For those who believe that all glamour and excitement have gone out of a Northern posting, following is an excerpt from a recent Progress Report from the Whitehorse Clinic:- "The station CO and the station supply officer took Capt Erskine on his maiden fishing trip on Discovery Day. Capt Erskine hooked the head of a previously caught and cleaned fish, got a rock through his windshield on the way

home and had two flat tires - with only one spare in the trunk. Apparently all Capt Erskine has to do now is wrestle a grizzly bear - and he will be a real Yukoner."

Capt WG Ebert of CFB Comox arrived home from a weekend's hunting (one moose) and was informed that his wife was in hospital expecting twins. This news came as a complete surprise. Final "count-down" - twins. Congratulations - both for the twins and the moose.

Sgt Yvonne Dundas and her husband Al are also congratulated for recently adopting three children aged from six to nine years. Yvonne has returned to work at the Griesbach clinic after four week's leave during which time she learned the whys and wherefores of "instant motherhood".

Honour Cadet



O/Cdt BP Schow of the University of Alberta was named Honour Cadet, First Practical Phase DOTP 1967. He was unable to be present at the marching-out parade held at CFB Borden in August.

O/Cdt Schow (now 2Lt) is shown receiving a miniature trophy from Col GC Evans.

Retirement

Maj MF Quinn retired from the Forces in August this year. Phil served with the RCAF during World War II. He graduated from University of Alberta with his DDS in 1953 and since that time has served as a dental officer in the Corps. It is believed that he will continue to practise Dentistry as a civilian in British Columbia. Best wishes for the future are extended from his friends in the Corps.

12 Dent Unit

Inspections and Visits

Col SG Bagnall combined an inspection visit to Gander and St John's with attendance at the Newfoundland Dental Convention held during the period 28-30 Sep. The R Dent O states that the convention was successful despite an enjoyable but fruitless tuna fishing expedition.

Accommodation

HMCS Bonaventure arrived in Halifax in mid September following refit at Lauzon, Que. The QM staff is busy installing equipment in the repainted clinic accommodation.

Sgts Arsenault and Forsythe have been attached to the "Bonnie" and Maj McMaster will go "on board" when the installation of equipment is completed.

Sports

The Gagetown Clinic reports that Capt Percival was a member of the Gagetown Golf Team which placed second in the Zone 7 Championships held at the Green Gables Golf Course, PEI, 7-8 Sep.

Cpl Solomon of the Cornwallis Clinic has entered the 100 mile Centennial Run, and has now completed 20 miles. Lots of luck!

Retirement

SSgt "Kelly" MacFarlane has retired from the Forces after 25 years of service. He transferred from the RCIC to the RCDC in 1951 and since that time has served from Calgary to Halifax, and also had a tour of duty with 35 Fd Dent Unit.

A party in his honour was held at The Snack Bar, Gorsebrook, attended by a good representation of RCDC personnel from the Halifax area. Capt JF Mullins made the presentation consisting of a suitably inscribed mug. Best wishes from all members of the Corps go to SSgt MacFarlane on this occasion.

13 Dent Unit

Sports

Coy HQ and 15 Dental Clinic held a well attended golf tournament 18 Aug 67.

Retirement

Sgt Cahill JR has retired from the Forces after 21 years of service. It is understood that he plans to remain in Kingston. Best wishes from his friends in the Corps go with "Jim" and his family for a happy and successful future.

Lt-Col RA Fell, in the presence of members of No 7 Dental Clinic staff, CFH Kingston, presents an engraved silver tray to Sgt Cahill on his retirement.



14 Dent Unit

Accommodation

No 14 Dental Unit Headquarters and No 1 Dental Clinic CFB Winnipeg represent

the last units in the La Verendrye Lines of Fort Osborne Barracks. The close-out of this historic army site had been set for 30 Sep 67. An extension has been granted to these units beyond this date pending completion of accommodation for relocation.



No 14 Dental Unit Headquarters and No 1 Clinic Staff

Kneeling - l to r - SSgt Piche, SSgt Strub, Sgt Mussey and Cpl Palmer
First row l to r - WO2 Stewart, Capt Fortier, Mrs Colleaux, Capt Blasetti,
Lt-Col Anglin, Capt Doyle, Miss Morkin, Lt Bowness, WO2 Mann and SSgt Roberts
2nd row l to r - Cpl Cormie, SSgt Jackson, Sgt Roy, Cpl Hansen and Cpl McKinnon

Special Events

The Pan American Games were held in Winnipeg from 17 Jul-4 Aug 67. During the Games No 1 Dental Clinic, Fort Osborne Barracks, provided emergency dental treatment for the athletes. Among those treated were representatives from Brazil, Cuba, USA, Trinidad, Argentina, Columbia, Chile, Jamacia, and even a few native Canadians.

Sports

No 14 Unit news points out that their golf team, attending the Fifth Annual Tournament, had the honour of having their names called first for the team prize. Unfortunately, the teams were announced in reverse order. The writer reporting the event philosophized - "it counts not that you won or lost, but how you played the game;" which is the only wise thing to do under the circumstances.

Maj Collier recently returned from the Yukon after a hunting expedition. He reported - no game available!

15 Dent Unit

Special Events

Lt-Col JC Brick attended 25th Anniversary celebrations of the Dieppe Raid held at Dieppe, France, 17-22 Aug. He saw action in the raid as Regimental Signals Officer with the Essex Scottish Regiment from Windsor, Ont.

Presentation



Capt JP Laporte was invited by the Quebec Dental Association to present a paper at their convention on "Hospital Dental Service Procedures and Laboratory Tests Available to the Dentist".

Capt Laporte is shown holding the plaque presented to him by Dr Jacques Fiset, President of the Scientific Committee, as an expression of appreciation.

Sports

CFB Valcartier played host to the area playdowns (zone 6) on 17 Aug 67. Maj JFA Marcil was on the winning team from CFB Valcartier.

1 Dent Eqpt Dep

Change of Command

On 15 Aug a Change of Command was held at No 1 Dental Equipment Depot with Maj JW Fletcher handing over to Maj PL Griffiths.



Back row 1 to r - WOL
AG Ponton CD, Capt EA
Church CD, WOL EC
Carpenter CD

Seated 1 to r - Maj PL
Griffiths CD, Maj JW
Fletcher CD

Sports

A twosome of Cpls Hall and McKay represented 1 DED in the annual "Tuffy Tieman" Golf Tournament held at CFB Borden 8-9 Sep.

The crew of yachtsmen at 1 DED is increasing, both Maj Griffiths and Lt Lobb having purchased new boats.

The RCDC School

Dental Officer Training Plan - 1967

Practical Phase DOTP Training was conducted at CFB Borden during the summer months.

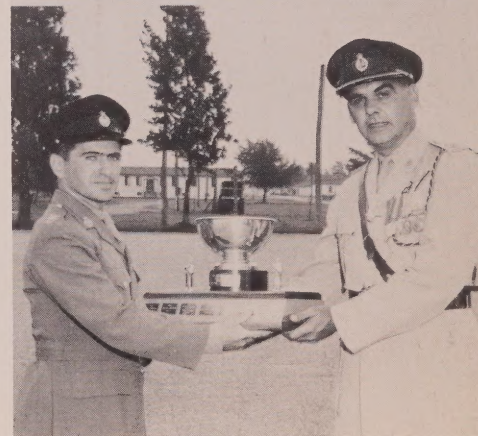
Brig BP Kearney visited the RCDC School on 3 Aug and attended the marching-out parade for DOTP candidates.



Upper left - Brig BP Kearney presents Third Phase Honour Cadet Trophy to 2Lt RCA Fearon (University of Alberta)



Upper right - Col GR Covey presents Second Phase Honour Cadet Trophy to 2Lt JC Steel (University of Alberta)



Lower right - Lt-Col AG Andrews presents the Chief Instructor's Trophy to 2Lt DE Gibbs (McGill University)

O/Cdt BP Schow (University of Alberta) was named Honour Cadet, First Practical Phase.

2Lt DA Graham (University of Alberta) was presented the Third Phase Honour Cadet Runner-up Award.

2Lt P Kozak (University of Alberta) was presented the Second Phase Honour Cadet Runner-up Award.

Field Exercise - 3rd Phase DOTP 26-28 Jul 67

A three-day field exercise was conducted at Meaford, Ontario, during which three mobile dental vans and a lecture room with six operating areas were used to

treat a total of 55 patients. The candidates worked in pairs and were rotated through all operating positions to gain experience in using field equipment.



3rd Phase DOTP - Meaford 28 Jul 67

Front row (1 to r) - 2Lts Arnold, Stirling, Gibbs, Graham, WOI Batten, Majs Taylor, Donely, 2Lts Rosengart, MacInnis and Morrow.

Back row (1 to r) - 2Lts Wood, Gunther, Nind, Wilford, Fearon, Dessureault, Stengl, Jalbert, Hawkins, Pettigrew, Campbell, Meunier and Schroeter.

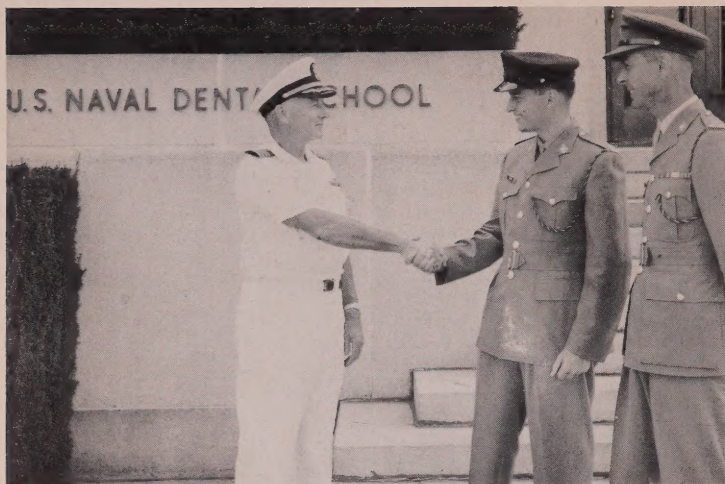
3rd Phase DOTP Familiarization Tour
of Military Installations, Washington DC, USA

At the conclusion of nine weeks' Third Phase DOTP training at the RCDC School, twenty candidates and Maj AG Taylor, the tour conducting officer, boarded a Hercules aircraft at CFB Borden for the three hour flight to Washington, DC.

The one week tour included visits to: Dental Activities - Walter Reed Army Medical Center, Naval Dental School - National Naval Medical Center, and Institute of Dental Research - National Institutes of Health.



Brigadier General Robert B Shira, Director of Dental Activities at WRAMC, meets 2Lt KHE Rosengart, class leader 3rd Phase DOTP



Captain KL Urban,
Commanding Officer,
US Naval Dental
School, meets 2Lt
RCA Fearon, 3rd
Phase DOTP Honour
Cadet

As well as being afforded an opportunity to see all dental facilities at these installations the class received a series of professional lectures from staff instructors at the Naval Dental School and Walter Reed Dental Activities.

The very full timetable kept candidates occupied from 0800 hours each morning until 1700 hours each evening. In their "spare time", visits were arranged to: the Whitehouse, the Smithsonian Institute and the US Marine Barracks.

At 0900 hours 12 Aug the group departed from Andrews Airforce Base for CFB Borden where the summer program was terminated and candidates returned to their respective universities.

Training

Cpl Jack A completed the First Aid Instructors Course at CFMTC on 6 Jul and also qualified to the Medallion Level in First Aid.

Maj JJN Wright attended a three day course from 7-9 Sep on "Occlusion" at the University of Western Ontario in London.

Meetings and Conferences

Lt-Col PS Sills presented a paper on "Practical Considerations for Complete Denture Stability" at the Newfoundland Dental Society Convention 28-30 Sep.

Sports

The annual golf tournament of the Huron Club was held at Base Borden on 29 Sep. Low net was won by Cpl Daryluck RW of the RCDC School.

Retirement

WO2 Jewson CC is retiring from the Forces after having been in the Dental Corps since 1941, apart from a two year period following World War II. WOs and Sr NCOs of the RCDC School gathered at the CFSAL Sergeants' Mess (CFB Borden) on 2 Oct 67 to present "Chuck" with a hand-painted plaque bearing the RCDC Crest, and to bid farewell and extend best wishes on his retirement. It is believed that he plans to settle in Montreal and become affiliated with the Dental Faculty of McGill University.

1 Dent Unit

Special Events

A Centennial Dinner Dance hosted by 1 Dent Unit for all ranks, their wives and friends in the Ottawa area was held on 8 Sep 67. This informal occasion was honoured by the attendance of Brig BP Kearney and other senior officers from the Division; and also two former Commanding Officers of the Unit, Col CM Cornish and Lt-Col WH Carter.



The hall and tables were decorated with Centennial "trappings". Refreshments and a "sit-down dinner", followed by dancing by candle-light provided an atmosphere in keeping with Centennial celebrations.

4 Fd Dent Coy

Field Operations

On 25 Sep the Unit moved to the concentration area with 4 CIBG for "Exercise Rob Roy". This was a large scale corps exercise covering a large area from Hannover - Lipstadt - Kassel, and with Canadian, British, Dutch and Danish troops involved.

Special Events

Special events were held throughout the Brigade area on 1 Jul 67 to mark Canada's Centennial. Provincial floats were paraded throughout the area and many social functions were held in the evening. Two dental vans with trailers were included in the "roll past" at Fort York and a clinic van and a laboratory van were set for display.

Retirement

SSgt Tait AJ departed from Germany for Canada on release after having been associated with the Dental Corps since 1940 (apart from broken service following World War II). Art remustered from DA to DER in 1961. On retirement from the Corps he will assume employment with the Faculty of Dentistry, University of Western Ontario. Best wishes go with him in his new career.

35 Fd Dent Unit

Change of Command

The Change of Command for this Unit from Lt-Col JC Brick to Lt-Col DH Protheroe became effective 8 Jul 67.

Accommodation - General

It is reported that 35 Field Dental Unit in the Lahr area of Southern Germany is beginning to assume its permanent posture after several months of moving, family separations, lack of adequate housing, treatment on an "emergency only" basis and general confusion.

The efforts put forth by members of the Unit since last spring have resulted in the establishment of a spacious six-operatory dental clinic complete with general and ticonium laboratories at 1 Wing Air Base in Lahr.

More recently, Headquarters has been allocated excellent accommodation, also in a separate building near the clinic, and should move some time in November.

Special Events

This Unit was honoured by a visit from Brig BP Kearney DGDS and Mrs Kearney following their participation in the Annual USAEUR Dental Training Conference in Garmisch 5-7 Oct. Brig Kearney inspected Unit HQ, 1 Wing and 4 Wing Clinics on 10 Oct and he and Mrs Kearney were guests at a dinner given by the Officers of 35 FDU in 4 Wing Officers' Mess.

Lt-Col DH Protheroe, Maj JPA Legendre, Maj CM Mason, and Capt BH Weeks all accompanied by their wives also attended the USAEUR Dental Training Conference in Garmisch.

Dent Det Cyprus

Rotation

Capt J Thompson arrived in Cyprus on 18 Sep to replace Capt D Wilson.

Sgt Bleakney J and Cpl Beauchamp CS arrived in August and October respectively, replacing Sgt Wilkinson G and Cpl Bosch P.



l to r - Sgt Bleakney J, Capt D Wilson, Cpl Bosch P and Capt J Thompson

The new members of the Detachment are well "settled in", having become familiar with working conditions; and also having been introduced to sailing, swimming in the Mediterranean, Finnish sauna baths, and some of the places of interest on the Island.

Professional Training

US Naval Dental School - Bethesda, Maryland, USA

Major Y Kamachi	- Fixed partial dentures	- 20 Oct-17 Nov 67
Capt GDV Dippel	- Complete dentures	- 25-29 Sep 67

Walter Reed Army Medical Center, Washington, DC

Major LA Reynolds	- Advanced Theory & Science of Dental Practice	- Aug 67-Jun 68
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University of Toronto

Major JW Jolly	- Dental Public Health	- Sep 67-Jun 68
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University of Western Ontario

Major JN Wright	- Occlusion	- 7-9 Sep 67
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Royal College of Surgeons - London, England

Major RJ Paturel	- Basic Dental Science	- 30 Oct 67-19 Jan 68
Capt RM MacDonald	- Basic Dental Science	- 30 Oct 67-19 Jan 68

Training

Williams Refining Company, Buffalo, New York, USA

Crown & Bridge Course and Familiarization in Pyroplast - 11-15 Sep 67
Lt C Johnston

SS White Company, Staten Island, New York, USA

SS White Equipment Course - 11-12 Sep 67

WO2 Conkey MF, Sgt Dave EA, Sgt Kennedy JF

RDCD School - Canadian Forces Base Borden

Dental Laboratory Technician Level 4 - 28 Aug-15 Dec 67

Cpls Anderson GM Feeney DC, Lindsay RS, Maelde P, McKenzie JN, Renwick WH, Tallack RJ, Taylor TH, Timmers PAG, Walker JM; Ptes Arbour JMM, Cloutier JRA

Dental Assistant Level 3 - 10-8 Dec 67

Cpls Armstrong PJ, Hache MJ, Parent TJ, Swiatkevich VH; Ptes Allen DG, Calnen RD, Clarke RM, Cooper TJM, Dale JE, Eden DM, Morphett DJ, Muir JA; AW2 Cook MA, Derksen BJ, Kent MM, Kidd LC, Lamoyne BA, McEllistrum SAF, Morton GD, Tucker BR; LAW Acres CJ, Audet MFE

No 1 Dental Equipment Depot - Canadian Forces Base Petawawa

Dental Equipment Maintenance Technician Level 4 - 5 Sep-8 Dec 67

Cpls Duffield RG, Wesley JA; Pte Burt GR

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Maj PL Griffiths; LAW Audet MFE; AW2 Bondy CA, Cook MA, Derksen BJ, Kent MM, Kidd LC, Marcoux HL, McCaffery BH, McEllistrum SAF, Moore IJ, Morton GD, Parker JG, Roseberry MF, Tucker BR; Pte Cudmore WG

Promotions

To Lt - RW Bowness

To WO2 - Kirby HC

To SSgt - Jones RK, Minelli JV, Tanner ED

Retirements and Releases

Majs DJ MacPhee, MP Quinn; Capts JML Rochefort, WE Russell; Lt ESW Moore; WO2 Jewson CC; SSgts MacFarlane AJA, Tait AJ; Sgts Cahill JR, Fenton DL; Cpls Harmer WPC, Kilgrain BC, Kirley SJ, MacMillan SJ, Pringle JM; Mrs O Johnson

Vital Statistics

Marriages

Capt JYG Jacques to Miss Huguette Neault, Capt GO Lepage to Miss Lise Falardeau, Capt DA Stewart to Miss Elizabeth June Yeomans, Capt JO Strom to Miss Glenys Pamela Thomas; Sgt Cable to Miss Leslie Gayle Kingdom, Sgt MacPhee to Miss Joan Elizabeth Haines, Sgt Pink A to Miss Rodina Marie Ward; Cpl Butson to Miss Sandra Ann Laycock; Pte Muir to Miss Sonya Kalinosky

Births

Son - Capt & Mrs WG Ebert (twin sons), Capt & Mrs TC Ringland, Capt & Mrs HA Pankratz (adopted), Capt & Mrs EI Gerard, Capt & Mrs RF Cooper, Capt & Mrs WD MacKenzie; Sgt & Mrs GN Fathers; Cpl & Mrs WB Looker, Cpl & Mrs RM Haiplik, Cpl & Mrs HB Clifton; Pte & Mrs MJ Craig

Daughter - Capt & Mrs BM Trepanier, Capt & Mrs BW Yates; Cpl & Mrs TD Cormie, Cpl & Mrs JPAG Cliche

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ROYAL CANADIAN DENTAL CORPS

Quarterly

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~~OVERNIGHT BOOK~~



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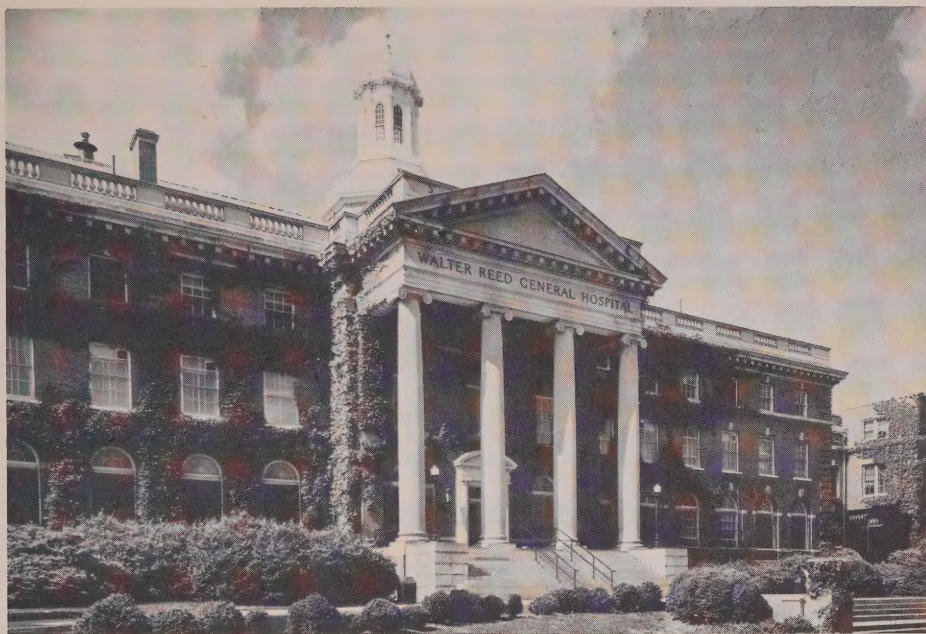
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Ottawa 4, Ontario.

Cover Photograph

Demonstration - Officers' Clinical Course
RCDC School - Camp Borden



Main Entrance - Walter Reed General Hospital

WALTER REED ARMY MEDICAL CENTER

Since 1949, when the first RCDC officer was sent to "Walter Reed" for post-graduate training in Dentistry, the Corps has had the privilege of being almost continuously represented at that Institution. The resulting over-all benefit to the Corps cannot be estimated. It therefore seems appropriate that any of our members unfamiliar with the history and function of "Walter Reed" should become informed and that is the purpose of this brief article.

Walter Reed - the man

A name which has become famous in the world of Medicine is that of Walter Reed. However, few people know why this name was given to one of the great medical centers of our day.

Walter Reed was born in Belroi, Virginia, in September 1851. He studied at the University of Virginia and at the Bellevue Hospital Medical College. In 1875 Doctor Walter Reed entered the Medical Corps of the United States Army and spent the next eighteen years in service at different army posts in Arizona and other Western Territories.

After taking special training at John Hopkins University, he was promoted to the rank of Major in 1893 and became professor of Bacteriology and Clinical Microscopy in the newly organized Army Medical School in Washington, DC.

Interested in research, Major Reed studied the causes and methods of transmission of diphtheria, erysipelas and typhoid fever.

* Editor's Note

This brief history of "Walter Reed" and commentary regarding the RCDC's association with that Institution was submitted by Major JY Turcotte who recently completed the course in "Advanced Theory and Science of Dental Practice".

On February 15, 1898, a United States battleship, the Maine, was sunk in Havana harbour and this event constituted a principle cause for the Spanish-American War. American troops departed for Havana and in June 1900 Major Walter Reed was assigned to Cuba. The United States Government had taken over Cuba on January 1, 1899, and the main problem it was facing was the maintenance of health under conditions which for centuries had been frightful; one main concern: Yellow Fever.

In 1900, Reed began special work in Cuba as head of a commission of medical officers appointed to study the cause of Yellow Fever and discovered the real infective agent. Using soldiers as volunteers the medical commission demonstrated in 1901 that only through the bite of the mosquito "Aedes Aegypti" was Yellow Fever propagated. The commission enforced the screening of doors and windows and poured kerosene over the swampy breeding places, thus exterminating the plague that had been a curse to Havana for more than 140 years.

On his return to the United States, Walter Reed resumed his teaching position at the Army Medical School and also became professor of Bacteriology and Pathology in the Medical School of Columbian (now George Washington) University.

In November 1902 Major Reed was admitted to the hospital with appendicitis. His good friend Major William C Borden performed the operation, but peritonitis developed and on November 23rd 1902 he passed away.

Walter Reed's remains were interred at Arlington Cemetery. The epitaph on his monument reads: "He gave to man control over that dreadful scourge, Yellow Fever."

The Hospital and Institutes

Walter Reed Medical Center, Main Section, is located in an attractive residential section of Washington DC between Rock Creek Park and Georgia Avenue near the DC-Maryland line. Today the Center comprises more than one hundred rose-brick structures of Georgian style architecture with an average daily population of more than 7000.

On September 1st, 1923, the Army Medical Center was formed, including the hospital, the Army Medical School, the Army Veterinary School and the Army Dental and Nursing Schools.

As a tribute to the conqueror of Yellow Fever, the Center was renamed "Walter Reed Army Medical Center" on the 100th anniversary of Reed's birth in September, 1951.

In 1955 the Armed Forces Institute of Pathology moved from downtown Washington to an ultra-modern bomb resistant building on the campus.



The Armed Forces
Institute of Path-
ology

- the only building
within the complex
not faced with rose-
brick

In addition to Walter Reed General Hospital, institutions that have joined the fight against illness at Walter Reed include the United States Army Institute of Research, Armed Forces Institute of Pathology, U.S. Army Medical Biomechanical Research Laboratory, the Army Medical Services' Historical Unit, U.S. Army Institute of Dental Research, U.S. Army Regional Dental Activity and the Walter Reed Army Institute of Nursing.

It is interesting to note that three dental officers pursue post-graduate training at the Armed Forces Institute of Pathology, a tri-service agency of the Department of Defence.

The Army Prosthetic Research Laboratory situated at Forest Glen, which is now called the United States Army Medical Biomechanical Research Laboratory, is under the direction of a specialized Dental Officer. Besides artificial limbs, the Laboratory has been working on an artificial hip, artery and trachea. The artificial ears, noses, hands and limbs duplicate the individual's skin tone and even provides hair, bruises and freckles!

The Army Central Dental Laboratory, now known as the United States Army Regional Dental Activity, provides a modern two-story air-conditioned building where complete dentures, partial dentures, crowns and bridges are made together with oral surgical splints. The building also houses the Department of Dental Materials, United States Army Institute of Dental Research, where new products are currently tested and evaluated with the most modern equipment.

Post-graduate Courses

The RCDC has long been represented at the United States Army Institute of Dental Research, presently under the direction of Colonel George W. Burnett. This institute is responsible for dental graduate, post-graduate courses, and research. The teaching is done by Army Dental Officers specialized in disciplines such as Anatomy, Microbiology, Oral Pathology, Biochemistry, Pharmacology, Physiology, Oral Medicine and all the other specialties of Dentistry. They are assisted in extended courses by professors from the Georgetown University. Of twenty-three Dental Officers on staff at the United States Army Institute of Dental Research, four have earned PhD degrees.



United States Army Institute of Dental Research

In the past, the main course offered by the Institute of Dental Research was that of Dentistry Advanced, of four month's duration and presented twice a year. It has been replaced by the Advanced Theory and Science of Dental Practice, a course of ten month's duration, which consists of a program of graduate study conducted by Georgetown University Graduate School and the United States Army Institute of Dental Research. Thirty semester hours of graduate credit are given by Georgetown University Graduate School for the successful completion of this course. In addition to this ten month's course, the United States Army Institute of Dental Research offers other short courses such as the Current Concepts in Restorative Dentistry, Preventive Dentistry, Prosthodontics, Oral Surgery, Periodontics, Advanced Pathology of the Oral Region and Oral Diagnosis and Therapeutics. These courses are offered to United States military dental officers, civilian practitioners and allied forces dental officers.

Finally, clinical dentistry is practised in two clinics at Walter Reed. One is called the out-patient clinic, the other the main clinic of Walter Reed General Hospital. All referred and in-patients are treated in the main clinic. Twenty-nine Dental Officers are assigned to these two clinics and six of these are board certified specialists. Under their direction eight residents and four interns undergo training.

RCDC Officers who have attended courses at Walter Reed

Major TL Marsh - Dentistry Advanced - Class 1 - January-April 1949

Major WM Sinclair - Dentistry Advanced - Class 5 - January-April 1951

Major GR Covey - Dentistry Advanced - Class 6 - August-December 1951

Major GRH Cunningham - Dentistry Advanced - Class 12 - August-November 1954

Lt-Col BF Kearney - Dentistry Advanced - Class 15 - January-May 1956

Major JC Brick - Dentistry Advanced - Class 15 - January-May 1956

Major GC Evans - Dentistry Advanced - Class 16 - August-November 1956

Major G MacDougall - Dentistry Advanced - Class 18 - August-November 1957

Major JW Turner - Dentistry Advanced - Class 21 - January-May 1959

Lt-Col CE Purdy - Dentistry Advanced - Class 23 - January-May 1960

Major WR Thompson - Dentistry Advanced - Class 26 - July-November 1961

Major PS Sills - Dentistry Advanced - Class 25 - January-May 1961
Trends in Dental Laboratory Activities - October 1964
Residency in Prosthodontics - September 1964-August 1966

Major DH Skinner - Dentistry Advanced - Class 29 - January-May 1963

Major JN Wright - Advanced Theory and Science of Dental Practice
Class 2 - August 1964-June 1965

Major AG Taylor Advanced Theory and Science of Dental Practice
Class 3 - August 1965-June 1966

Major JY Turcotte - Advanced Theory and Science of Dental Practice
Class 4 - August 1966-June 1967

Major LA Reynolds - Advanced Theory and Science of Dental Practice
Class 5 - August 1967-June 1968

OCCUSAL INTERFERENCES A NEGLECTED ASPECT OF FIXED PROSTHODONTICS

Major Y Kamachi, BA, DDS



Introduction

During recent years there has been much interest and emphasis placed upon the pathology of the oral structures resulting from mal-occlusion. Some of the conditions resulting from occlusal or cuspal interferences include bruxism, extreme tooth wear, spasm of the masticatory muscles, tempero-mandibular and facial pain, tooth trauma and breakdown of the periodontium.

One must consider the removal of cuspal interferences in the initial treatment plan for a crown and bridge prosthesis. The resulting occlusion should supplement and complement the existing dentition and should be harmonious with the existing mandibular function.

Factors Influencing Occlusion

Occlusion is influenced by:

- a. the shape of the tempero-mandibular joint.
- b. the mandibular musculature,
- c. the occlusal planes of the teeth.

The Jaw positions determined by the tempero-mandibular joint include centric relation and right and left lateral relations. The jaw positions determined by the teeth include centric occlusion and right and left lateral occlusion.

Centric relation is the position of the mandible when both condylar heads are in their most retruded position in the glenoid fossae from which lateral movements can be made at a given degree of jaw separation. Centric occlusion is a contact position which may be functional and it does not necessarily coincide with centric relation.

Occlusal harmony exists only when centric and lateral occlusions are compatible with centric and lateral relations and occlusal problems develop when this harmony is disrupted. In the following technique the mouth is used as an articulator in a procedure to eliminate interferences and establish a balanced occlusion.

Technique

A central bearing device or occlusal co-ordinator, more commonly called "Jeffrey's Appliance", can be used in the mouth. It can be fabricated quickly and easily in any dental office with cold-cure resin and a brass machine bolt.

Fabrication of the co-ordinator - Maxillary Section

- a. On the patient's upper cast build a wax dam extending across the palate from the embrasures between the second bicuspid and first molar.
- b. Pour in a creamy mix of cold-cure resin bringing the flat plane of the maxillary appliance to a level approximately 2mm coronal to the gingival margin.
- c. When the resin is hard, remove the appliance and polish the flat bearing surface.

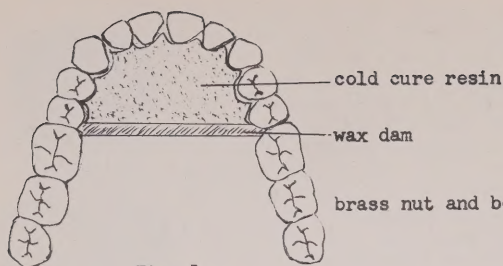


Fig. 1
Maxillary Section

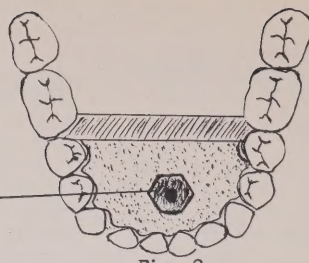


Fig. 2
Mandibular Section

- Mandibular Section

- a. Form a wax dam similar to the one for the maxillary section.
- b. Wax a brass nut and bolt upright immediately lingual to the anterior teeth. (machine bolt 8 x 32)
- c. Pour in a creamy mix of cold-cure acrylic and fill to within 1mm of the tips of the mandibular incisors, embedding the nut and thinly covering the lingual cusps of the first bicusps. This helps to provide stability.
- d. When the acrylic is set remove and polish the appliance. After shortening the bolt, round and polish the tip.

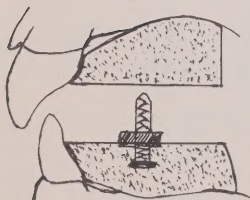


Fig. 3
cross sectional view
of co-ordinator

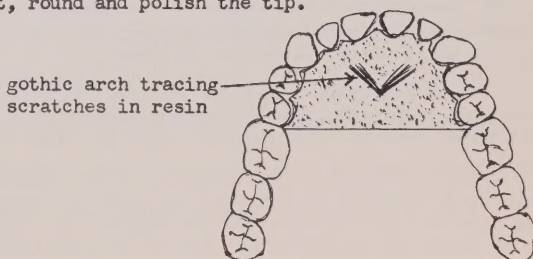


Fig. 4

Fitting the co-ordinator sections is completed in the patient's mouth by:

- a. relieving acrylic that interferes with tooth contact in centric;
- b. removing any interference between the maxillary and mandibular sections.

Using the Co-ordinator

After placing the two sections in the mouth, the bolt is adjusted so that there is no tooth contact in any jaw position. The patient is instructed to move the mandible in all excursions with the bolt in light contact with the maxillary section. This procedure induces relaxation of mandibular movement and the patient can be taught to scribe an acceptable gothic arch tracing. (Fig. 4) The apex of the arch represents centric relation, i.e., the mandible in its most retruded position. When the same gothic arch can be repeated by the patient, one can proceed with the next step in the technique.

Centric occlusion is adjusted in the following manner:

- a. gradually lower the bolt until the first tooth to tooth contact is made;
- b. ensure that the bolt is at the apex of the gothic arch tracing (i.e. centric relation);
- c. repeat this step, marking the initial contact each time to be assured of accuracy;
- d. grind the first premature contact and continue to make adjustments using a technique in accord with the physiological principles which will maintain harmony within the stomatognathic system;
- e. continue to lower the bolt and remove interferences in centric until an acceptable centric occlusion is achieved.

Lateral excursions are adjusted in the following manner:

- a. raise the bolt to free tooth contacts in lateral excursions;
- b. instruct the patient in making left and right lateral excursions;
- c. lower the bolt until initial contact is made and proceed to equilibrate lateral excursions;
- d. care must be taken to check the "balancing" or "non-working side" contacts, removing prematurities in this area as the working side is equilibrated.

* Note: The occlusal co-ordinator plays less and less a part as a balanced occlusion is approached. With the co-ordinator in place and the occlusion balanced, the teeth should contact exactly as they do without the appliance in the mouth; and when this occurs, harmony in the stomatognathic system has been achieved. In other words, the temporo-mandibular joints and the mandibular musculature, and not the teeth, have become the guiding factors in determining positional relations during the equilibration technique.

Summary

An occlusal co-ordinator is described which can be used to achieve occlusal harmony directly in the mouth prior to initiating the construction of a crown and bridge prosthesis. The importance of achieving occlusal harmony to prevent further trauma of the periodontia, temporo-mandibular joints and the remaining teeth is emphasized. Furthermore, this technique will help to ensure success of the prosthesis during its construction and after its insertion.

1. Contino, R.M. and Stallard, H., Instruments essential for obtaining data needed in making a functional diagnosis of the human mouth. J. Prosth. Dent. 7:66-77, 1957.
2. Jeffreys, F.E. and Platner, R.L., Occlusion in removable partial dentures. J. Prosth. Dent. 10:912, 1960.
3. Klecinic, E., Personal communication, U.S. Naval Dental School, Nov, 1967.

Studies completed in 1963 indicated that dentists had the highest mortality rate among professional men in the 45-54 age group and a high rating in the 55-64 age group.

- Brit. Dent. J. 123:465, Nov. 1967.

RESTORING CROWNS OF CLASP BEARING TEETH

Major Y Kamachi, BA, DDS

Introduction

A problem frequently faced by the dentist is the grossly decayed abutment tooth or a broken crown of an abutment tooth upon which rests an acceptable partial denture. In the past, usually the procedure of choice was to extract the offending tooth and add an artificial tooth to the partial denture, or extract the tooth and remake the partial denture. Another alternative was to restore the tooth with a pin supported amalgam and try to fit it to the clasp of the prosthesis. Under these circumstances, achieving an accurate fit and restoring the contact and contour of the original tooth is a most difficult procedure.

The treatment of choice is to make a cast or dowel crown for a non-vital tooth and remake the partial denture. However, the crown of a clasp bearing tooth can be restored with a great deal of accuracy and this paper gives a step by step description of a procedure utilizing Inlay Pattern Resin in a direct-indirect technique.

Inlay Pattern Resin

Inlay pattern resin is known by its commercial name "Duralay"*. It is a quick-setting cold-cure acrylic, which when used according to the manufacturer's instructions has proved to be clinically acceptable for making patterns. Each successive layer of acrylic added by the brush technique compensates for shrinkage of the previous layer. The final layer is overextended and trimmed flush with the margins with a burr or disc. Its hardness prevents fracture while checking the occlusion, and it will not distort when drawn from the tooth. Temperature changes do not affect it appreciably and the mould produced after burn-out is clean, smooth and without residue. It has many uses in crown and bridge prosthodontics including: patterns for inlays, full crowns, veneer crowns, gold cores for porcelain fused to gold, and dowels; impressions for crowns; and tying in the nylon pins for pinlays.

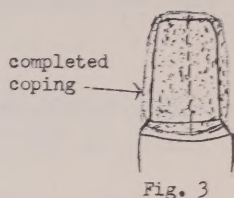
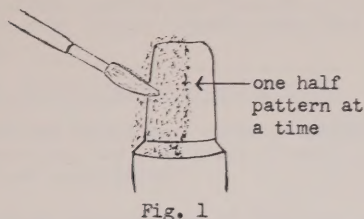
Technique

- a. The grossly decayed tooth is restored with a pin supported amalgam. The pin amalgam will serve as a core for a full veneer preparation. Courtade² recommends self-threading pins, as opposed to cemented and friction-locked pins.
- b. All non-vital teeth and those of questionable vitality are treated endodontically. If the root filling is restricted to the apical third of the root, preparation of the canal for a cast dowel will be minimal. When a cast dowel is used, ensure that it can be seated with finger pressure only. "Hammering" the dowel may split the tooth.
- c. A full veneer crown preparation is completed on the amalgam core or dowel.
- d. The gingival tissue is retracted with the retraction kit, hemodent, or zinc chloride treated cord. Before removal, two or three drops of 1/1000th adrenaline may be applied to the cord.
- e. Rubber base impression material is injected around the prepared tooth and the impression completed with the same material so that a working model of the arch can be prepared. The cast is poured in die material, using a Ney pin for the tail of the die of the abutment tooth.

Laboratory Phase

- a. The abutment die is cut out of the working model, trimmed, and then lubricated with inlay pattern resin lubricant.

- b. A coping is fabricated on the die with inlay pattern resin, using the brush technique and applying the resin to one-half of the die surface before proceeding with the other half. Adding resin in this fashion prevents the pattern from adhering rigidly to the die. The resin is applied by moistening the camel hair brush in resin liquid, picking up a bead of powder on the moistened brush and applying it to the die. Dipping in hot water hastens the set of the resin.



Chairside Phase

The pink resin coping is placed on the prepared abutment tooth in the mouth and it is built up by adding resin - using the brush technique.

While the resin is soft, the partial denture is seated in the mouth. The occlusal rest, guiding plane and clasp will leave an indentation or a shiny surface on the resin coping. (Fig. 4)



Fig. 4
partial denture seated

blue inlay wax to finish
contact areas, contours
and margins
coping
impression of guiding
planes
contact area with I bar

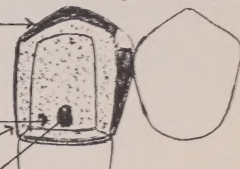


Fig. 5

The coping is removed and trimmed to the margins of the die. It is then used as an index and base to which inlay wax is added to complete the wax-up for the crown. (Fig. 5) On returning the die and patterns to the working model the original contact and contour can be completed with inlay wax.

In completing the wax-up, it should be kept in mind that contact areas of the crown with metal areas of the partial denture framework should be restored in metal. If aesthetics so demand and if space is available, acrylic veneer can be provided for by carving retentive areas into the wax and resin.

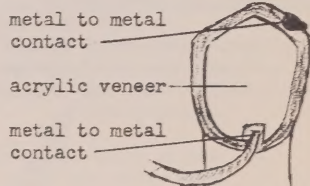


Fig. 6

The pattern is sprued, invested, and the crown cast.

In preparing the crown for cementation, all margins must be checked for fit and accuracy, including contact areas with clasps and rests, and also the relationship with adjoining teeth.

Finally, the crown is polished and cemented to place.

Summary

An acceptable partial denture resting on a grossly decayed or broken down tooth is commonly encountered. A simple technique is described in which the crown

of a clasp-bearing tooth is reconstructed, restoring it to its original relationship with the partial denture it supported. The method also permits restoration of the crown in relation to the remaining teeth.

*Duralay: "Inlay Pattern Resin", Reliance Dental Manufacturing Co.

1. Klecinic, E. Personal communication, U.S. Naval Dental School. Nov, 1967.
 2. Courtade, G.L. Personal communication, U.S. Naval Dental School. Oct, 1967.
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CHAIRSIDE TIPS IN CROWN AND BRIDGE PROSTHODONTICS

Major Y Kamachi, BA, DDS

Hyperplastic Gingival Tissue

Electro-surgery provides a most convenient method for removal of hyperplastic gingival tissue surrounding the teeth selected as abutments, and this can be done during the appointment for tooth preparation. The gingival tissue can be recontoured quickly with minimal bleeding and little discomfort to the patient. A minor objection from the patient's point of view is the odour created by the procedure.

Endodontically Treated Teeth

All endodontically treated teeth selected as abutments must be restored with a dowel. Cardinal rules in the use of dowels include the following:

- a. the dowel should be as long subgingivally as the final restoration is supragingivally;
- b. as much of the natural crown as possible should be preserved;
- c. the dowel must fit so that it can be placed by finger pressure;
- d. the cast dowel must be independant of the final restoration because each may have its own path of insertion.

Rubber Base Impressions

- a. Mixing heavy rubber base can be facilitated by using two glass slabs. The initial mix is started on the slab and then transferred to a second slab for final spatulation. This ensures a smoother, creamier mix with an even consistency.
- b. Rubber base impressions should be flushed with hydrogen peroxide, washed with water and dried with air before pouring the die material. The effervescent action of the peroxide rids the impression of blood and salivary debris.

Adjusting Full Crowns

In checking the fit of a full crown when the exact location of the interference cannot be determined, paint the inside of the crown with blue or red stencil correcting fluid. The dried stain will be rubbed off by areas of first contact which may then be judiciously relieved with a burr or stone, permitting the crown to be seated.

Checking the Occlusion

Dry the teeth thoroughly with gauze before using articulating paper because moist teeth will not mark adequately.

Removing Tight Fitting Crowns

The margins of tight fitting full crowns are easily marred on removal during try-in. In order to overcome this problem, wax two knobs onto the pattern - one on the buccal and one on the lingual surface free of the occlusion - before spruing and casting. These act as handles, permitting removal of the crown with hemostat forceps. When no longer required, they are trimmed off and the surfaces polished.



Fig. 1

Reducing Sensitivity of Prepared Teeth

Before cementing a crown or inlay, wash the preparation thoroughly with hydrogen peroxide, dry, and paint it with copalite. Copalite seals the dentinal tubules and reduces sensitivity.

Providing for Easy Removal of Temporary Crowns

Lubricate the prepared tooth with vaseline before cementing a temporary crown with temporary cement. On subsequent appointments the crown can be readily removed and the cement will not stick to the preparation. Most zinc oxide cements will set with vaseline incorporated into the mix.

Beading Temporary Crowns

When fabricating temporary crowns, whether they be acrylic or aluminium, bead the gingival margin with cold-cure acrylic to obtain a butt joint. Beading adds strength, makes the margins of the crown more acceptable to the soft tissue, and displaces tissue so that the margins of the preparation are more clearly visible on subsequent appointments.

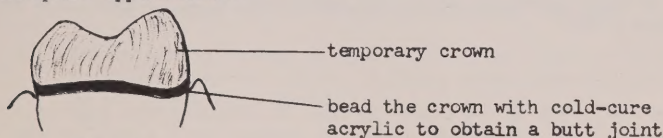


Fig. 2

Waxing Up Pinlays

In order to insure that nylon or metal pins will draw without danger of fracturing or distorting the wax pattern, "tie in" the pins with Duralay. Remove the pins, re-lubricate the die before replacing them and finish the pattern with blue inlay wax. The resin on the lingual surface is strong enough to permit checking the occlusion and can also be used to develop cuspal or incisal guidance before the wax-up is completed.

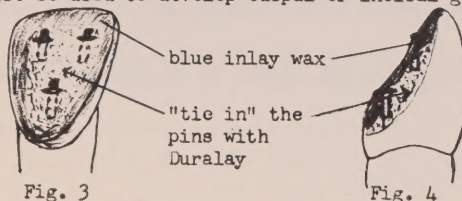


Fig. 3

Fig. 4

1. Johnston, J.F., Philips, R.W., and Dykema, R.W. Modern practice in crown and bridge prosthodontics. 2nd ed. Philadelphia, Saunders, 1965.
2. Klecinic, E.. Personal communication, U.S. Naval Dental School. Oct, 1967.

* Editor's Note -

Major Kamachi recently returned from a post-graduate course in "Fixed Partial Dentures" at the US Naval Dental School - Bethesda.

PREVENTIVE MAINTENANCE OF CHROME-COBALT EQUIPMENT

W02 WD Morris, CD



Introduction

The Ticonium Company introduced its first electrical casting machine in 1934, and since then constant improvements in materials and equipment for casting chrome-cobalt alloy have found their way into the modern laboratory. The RCDC has been using chrome-cobalt alloy for dental appliance fabrication for over 17 years.

Equipment that is now considered standard and common was not always so. It became necessary to design, adapt and modify in order to meet various techniques and methods, and undoubtedly this evolution of equipment has made possible improvements in present day standards. As the demand increased, it became necessary to develop machines for casting chrome-cobalt more quickly and with greater accuracy, and at the same time remove the human element of judgement in reading the melt. The next step could well be "push the button and stand back".

The chrome-cobalt equipment in use in the larger RCDC is standard in operation, care and maintenance. Problems with the equipment are few, but the points in this article regarding major equipment lay out and assistance to laboratory technicians.

The Ready Duplicator

- a. The felt strip on the cover is important in that it prevents the loss of water through evaporation. The cover should be checked once a week to ensure that it has a snug fit.
- b. When adjusting the thermostat for temperature, a clock-wise turn decreases the heat and a counter clock-wise turn increases it. 1/3 turn = approximately 20°F. (The correct storage temperature is 135°F)
- c. In order to prevent the colloid from pitting and corroding the stainless steel inner container, a light film of silicone spray (available in 20 oz spray can) is applied to the surface after cleaning and prior to refilling with new hydrocolloid.
- d. The water level in the jacket should be checked once a week.

Pre-Heating Oven

- a. The three vent holes in the cover are provided to ensure a free circulation of air and a means by which gasses may escape. The floor of the oven is also provided with a vent hole. Prior to loading the oven, these vent holes should be checked for debris which might hinder circulation.
- b. The thermocouple protective tube should be checked frequently for corrosion at both top and bottom. Once the tube leaks because of corrosion, the gasses will attack the thermocouple and true readings on the pyrometer will not be obtainable.
- c. If the exhaust fan duct is provided with an extension that fits directly over

the oven cover, there must be at least one inch of air space between the top of the oven and the duct to allow air from the room to equalize the suction through the oven vent holes. The velocity of the fan must be sufficient only to remove the gasses and not cool the oven.

Dater Time Switch

- a. If the time switch fails to close the circuit as it has been set to do, the fault could lie in any of the following:
 - (1) incorrect setting of the clock;
 - (2) the electric power to the switch may be turned off at the panel;
 - (3) failure of the timer motor;
 - (4) failure of the contacts on the main contactor to close.
- b. Before calling for DEM Tech service, determine the cause if possible.

Casting

- a. Lack of maintenance on the copper finger which rides on the copper rotor causes wear and in time both surfaces will become scored. This not only causes undue friction, but also a poor electrical contact.
- b. When maintenance is being performed on the casting machine, the condition of the "pigtail" should be checked for any signs of break down. It is the copper rotor section and receives considerable flexing due to the locking action caused by balancing the arm.
- c. The retaining screws which hold the long looping "pigtail" should be checked to ensure they are tight. A loose connection can introduce a large resistance in the electrical circuit.
- d. The part of the carriage which wears out most frequently is the "pigtail" assembly. If it is frayed, soft and spongy, it will greatly increase resistance and therefore should be replaced.
- e. When it is necessary to replace a mica washer or bushing, only the parts that are specifically designed for this purpose should be used. When necessary, the screw and washers in "kit form" should be ordered from the unit quartermaster.

Sand Blasting

- a. In order to prevent pieces of investment from plugging the sand tube, a screen in the shape of a ball should be placed over the tube end.
- b. The sand blaster bag should be emptied and laundered frequently. When the bag gets too full of sand, or the pores clog with investment dust, the effectiveness of cleaning is diminished because of back pressure. It is a good idea to have an extra bag on hand for use while the dirty one is being washed and dried.
- c. The sand blaster should not be overloaded with zircon grit since an excessive amount of abrasive can cut down operating efficiency.
- d. The correct size of inner and outer nozzles should always be used and the air supply kept dry by checking the condensation in the compressor.

The Automatic Spindle

- a. When a replacement spindle is received from unit QM, grease may have settled to the lowest point in the ball races. When first put into operation, the resulting unbalanced condition will cause overheating. It is therefore recommended that when the new spindle is installed, it should be run for a short time and checked for rapid overheating of the spindle body. If it overheats, by repeatedly stopping the motor and allowing the spindle to cool, the grease will be equally distributed in the ball races.
- b. The chuck must always have a mandrel in its jaws when the chuck release lever is in the "run" position. This prevents the head of the chuck from being drawn back too deeply into the nose cone. When the chuck is drawn back into the nose cone and is in the locked position, if the motor is turned on, the spindle will not turn and the friction developed from belt slippage will cause spindle overheating.
- c. At the end of the day it is a good practice to unscrew the collet, wipe it clean and put one drop of oil (not 3 in 1) on the threads. Wipe off the excess oil and re-insert the collet.
- d. The body of the spindle is egg-shaped. If the belt stretches so that it starts to slip, additional tension can be provided by rotating the body in its holder. Too much tension will cause pulley wear, but insufficient tension will cause loss of power and heat from friction as the belt slips.
- e. The belt should be removed once a week and both pulleys checked for cleanliness. Deposits on the pulley can cause belt slip or vibration and this can damage the shaft and bearings.

Conclusion

The foregoing maintenance tips will eliminate many of the maintenance and repair problems that commonly cause equipment breakdowns. If steps are taken to prevent these problems from occurring, the saving in labour, materials and money will justify the time spent on constructive preventive maintenance.

FILLING THE ROOT CANAL SILVER CONES

Major DH Skinner, CD, DDS



Countless hours spent in the fabrication of fixed and removable prostheses can be saved by adopting the simple expediency of endodontic therapy which has rapidly gained acceptance as a treatment of choice.

The advent of the silver cone as a means of filling the root canal has undoubtedly been a factor in promoting increased interest and success in endodontic

therapy. In the hands of the average practitioner it is easier to use than gutta percha cones, particularly for posterior or multirooted teeth.

Technique

Having completed filing the canal a silver cone of suitable size is selected. Using grooved tip cotton forceps it is seated firmly in the canal.

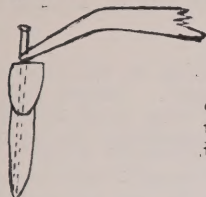


Fig. 1

The cone is grasped firmly with the forceps at the occlusal or incisal level, removed from the tooth and checked against the established length (i.e., the incisal or occlusal edge to the apical constriction).

If the cone is short, the canal is flooded with sodium hypochlorite solution and refilled until it can be seated to the established length.

If more than 1mm too long when seated, the cone is removed from the canal and the excess cut off the apical end.

When the cone has been seated to the correct depth, the incisal edge of an anterior or the cusp tip of a posterior is used as a reference point and the butt end is cut off at that level.

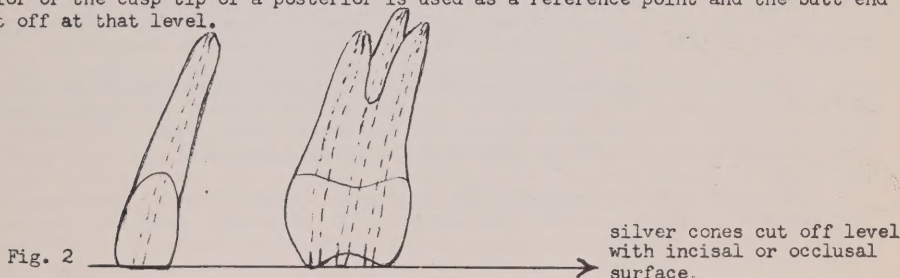


Fig. 2

Trial Radiograph

The trial radiograph may indicate one of the two following conditions which will require adjustment:

a. silver cone short of the apex

In this case, the length of the cone and the distance it is short of the apex is recorded. Then, beginning with a #15 file and with a marker set at the new length, the canal is filed until the cone can be properly seated. The butt end of the cone should now be apical to the incisal or occlusal reference point by the same distance it was formerly short of the apex.

b. silver cone extending beyond the apex

When the radiograph indicates that the silver cone extends beyond the apex, the excess is removed from the apical end and the cone resealed firmly. The cone should still be level with the incisal or occlusal reference point, the next larger size cone should be selected, seated and the procedure repeated.

In the case of multirooted teeth, all silver cones should be cut off at the

same level so that corrections may be made using the other silver points as reference points.

Sealing the Canal

When the cone has been adjusted to the correct length the canal can be sealed. It should be irrigated and dried thoroughly. The sealer is mixed on a slab and the cone is covered with paste and seated in the canal. One or two pumping motions aid in thoroughly coating the walls with sealer.

A small amount of gutta percha temporary stopping is placed on the floor of the pulp chamber and packed around the cone with a warmed plugger. Excess sealer paste is wiped from the chamber with a cotton pellet moistened with xylol. A mixture of zinc phosphate cement is then placed in the chamber to approximately the depth of an occlusal or lingual cavity preparation.

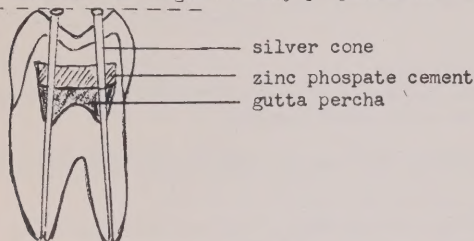


Fig. 3

Combination Filling

Many anterior teeth and bicusps are filled with a combination of silver and gutta percha cones. The procedure is the same as that already described, except that after the silver cone has been sealed with the sealer paste, fine gutta percha points are condensed along the cone to completely obliterate the canal.

When should gutta percha points be added? A simple test is by placing the #3 Kerr Spreader (used for lateral condensation) into the canal after the cone is seated. If the spreader can be inserted one half the length of the canal, then gutta percha cones should be condensed along side the silver cone. When they have been placed and condensed, a heated instrument (spoon excavator) is used to remove butt ends. The gutta percha is then condensed around the silver cone on the floor of the chamber, cement is added and the cone cut as before.

Notched Silver Cone Technique

When a dowel restoration is necessary or anticipated, the notched silver cone technique is indicated. The procedure is carried out as described previously, except that after the trial radiograph has been taken and the canal is ready to be filled, the silver cone is notched with a disk at the point at which it is to be severed in the canal - usually equidistant to the crown length. The cone is notched around its entire circumference and then seated with sealer paste into the canal. The butt end is grasped with forceps and twisted, pressure being maintained in an apical direction. The twisting severs the cone and the apical portion remains firmly seated.

When a restoration is not considered immediately, the remainder of the canal must be sealed with gutta percha points. At a future date when the dowel restoration is started, the gutta percha filling can easily be removed.

Conclusion

Silver cones simplify endodontic therapy and the technique described ensures controlled accuracy in seating and sealing them.

PORCELAIN FUSED TO GOLD

Major AG Taylor, CD, DDS



Introduction

Early attempts to use porcelain as a veneering material for fixed prostheses attained only limited success. In the 1930s Swann¹, Flecher² and Hovestad³ developed techniques for the construction of porcelain bridges which utilized metal reinforced substructures. Many of the problems experienced with the use of porcelain during this period have been solved or minimized with the development of improved techniques and materials in the past decade. Various "matched pairs" of porcelain and casting metal have made it possible for the average operator and laboratory technician to anticipate a very satisfactory result with the use of improved materials including: Ceramco, Thermolite, Micro Bond, Nobil Bond, Stern's Metal and Ticon.

Problems

The basic key to any porcelain-precious metal restoration is the compatibility of the porcelain to the metal in terms of linear coefficients of thermal expansion. The two coefficients of thermal expansion must be within $\pm .01\%$; that of the porcelain has deliberately been made slightly lower than that of the metal to put the porcelain in a slight state of compression. In a state of compression, porcelain is at its strongest.

The porcelain of one matched pair should never be used with the metal of another manufacturer. If, for instance, one attempted to veneer Thermolite metal with Ceramco porcelain, craze cracking would be a likely result due to the unmatched coefficients of thermal expansion. Under these circumstances a second undesirable result is that a noticeable difference is seen between the fit of the casting before and after veneering with the porcelain.

Until recently a characteristic of porcelain gold was its sensitivity to creep during firing of the porcelain. It is the nature of these metals to change shape or sag under load at a temperature two or three hundred degrees below the melting point. Ceramco has developed a sag resistant metal, SR 165, which when supported every $\frac{1}{2}$ inch over the length of the restoration during the firing cycle overcomes the problem of sag.

The metal substructure of porcelain fused to metal bridges must provide a greater degree of rigidity than is required with the use of other materials. The slightest amount of flexion will cause cracking in porcelain veneers. Pontics and connecting joints must be designed with sufficient metal bulk to make them completely rigid.

Much has been written concerning whether or not occlusal surfaces and tissue contact areas of pontics must be veneered with porcelain. Mumford⁴ advises that of importance is not the type of material that contacts the tissue, but rather the

Editor's Note

This is the third article in a series written by members of the team of RCDC personnel that visited the JF Jelenko Company at New Rochelle, N.Y. to observe the Company's research and development program associated with the porcelain bonded to gold technique.

amount; and that minimal contact with well polished gold is just as acceptable to the tissues as is porcelain. When the occlusal surfaces and ridge contact areas of the pontics are covered with porcelain the metal bulk is reduced sufficiently to permit flexion. Since an unyielding framework is a basic requirement in the use of porcelain fused to metal in fixed prostheses, it is recommended that occlusal surfaces and tissue contact areas of pontics be constructed of metal.

All connecting joints between pontics and retainers must be kept as large as possible to prevent flexion. While incorporating large solder joints in the pursuit of framework rigidity one must not make these joints so large as to become biologically unacceptable.

The esthetic problem with any veneering material is the dead opacity of the underlying metal. Light reflections from this opaque surface make the shade matching in a veneer an entirely different problem from the reproduction of colour in straight porcelain jackets. For this reason incisal edges and buccal cusp tips are reproduced in porcelain to approximate more closely the translucency of the all-porcelain jacket.

The porcelain has an opaque undercoat which is identical to the overlying porcelain except that the undercoat contains a large quantity of opaque metallic oxide. This opaque coat is enhanced in colour if the metallic surface is first coated with a layer of pure gold⁵. The metal has a gray hue which reflects through the porcelain. The application of the gold coat changes this reflection to a delicate light yellow.

Some manufacturers recommend these matched porcelains for all-porcelain jacket crowns. The aluminous porcelains now available are two to three times stronger than regular dental porcelains and are therefore better suited to this purpose. Even the aluminous porcelains, however, are not strong enough to replace porcelain fused to metal for fixed prostheses construction.

Nature of the Porcelain to Gold Bond

There are three possible sources of the bonding forces: wetting bond, chemical bond and mechanical bond.

The wetting bond, such as exists between two glass slides with a film of water between, is obtained simply by making sure that the metal surface is wetted by the porcelain. Wetting accounts for approximately one-third of the overall bond strength.

Chemical forces developed at the interface are attributed to the trace elements present in the alloy. These trace elements appear to penetrate about 10 microns into the porcelain to form oxides which dissolve in the porcelain during firing, thus forming a new substance at the interface. The shear strength between the porcelain and metal can be largely attributed to the chemical bond.

The significance of the mechanical bond gained by roughening the metal surface was found by Nielsen to be negligible⁶. An increase in bond strength of 13 to 15 percent was attributed to roughening of the gold alloy surface by Lavine and Custer⁷.

The shear strength of the bond between fused porcelain and gold with matched coefficients of thermal expansion exceeds 12,000 PSI. Since the shear strength of porcelain is about 6,000 PSI, it is evident that the bond between the alloy and the porcelain is stronger than the porcelain itself. The tenacity of the porcelain fused to metal bond is such that fractures occur within the porcelain rather than at the interface.

Conclusion

The need for a veneering material more durable than acrylic has been apparent

by the number of failures encountered with the acrylic veneer. Many of the problems associated with the use of acrylics and early metal reinforced porcelains have been overcome in the development of porcelain fused to metal materials during the past decade. The porcelain-metal combinations now available are fine, workable, and practical dental restorative materials.

1. Swann, H., Torque resisting porcelain bridge. Chicago Dental Convention, 1931.
2. Flecher, F.R., Platinum reinforced porcelain restorations. Dent. Digest, 43:24, 1937.
3. Hovestad, J.F., Porcelain bridges. Dent. Items Int., 58:239, 1936.
4. Mumford, G., Personal communication, Montreal Dental Club, Nov. 1967.
5. Hoffman, E.J., How to utilize porcelain fused to gold as a crown and bridge material. Dent. Clin. North America, 57-64, Mar. 1965.
6. Nielsen, J.P., Ceramco Manual No. M-104, J.F. Jelenko Co., New Rochelle, N.Y.
7. Lavine, M.H. and Custer, F., Variables affecting the strength of bond between porcelain and gold. J. Dent. Res., 45:32, Jan.-Feb. 1966.

The RCDC News

Corps Conference

The 18th Annual DGDS Study Period and Conference was held in Ottawa 5-7 Dec 67. The meetings were chaired by Col IG Craigie.



Seated L to R - Col JW Turner, Brigadier BF Kearney, Col IG Craigie
Standing L to R - Col CM Cornish, Col GC Evans, Maj JVP Chatwin, Col SG Bagnall, Lt-Col JW Fletcher, Col GR Covey, Lt-Col WH Harrington, Col RHG Cunningham, Capt E Clark, Lt-Col WW Anglin, Maj CA Casterton, Lt-Col IR Pierce, Lt-Col WR Thompson, Lt-Col G MacDougall

Annual Corps Association Meeting

Brig BF Kearney and Lt-Col G MacDougall attended the Annual Meeting of the Royal Canadian Dental Corps Association held in Ottawa 9 Dec 67.

Queen's Honorary Dental Surgeons Appointed

The Department of National Defence has announced the appointment of Colonel GR Covey, MBE, CD and Lt-Col MJ Snidal, CD as Queen's Honorary Dental Surgeons. Both appointments are for tenure of office.



Col GR Covey, MBE, CD, DDS
Commandant RCDC School
Camp Borden, Ontario



Lt-Col MJ Snidal, CD, DDS
Regional Militia Dental Adviser
Prairie Region, Winnipeg

Division News

Visits and Inspections

Col LG Craigie, Lt-Col WR Thompson and Maj CA Casterton visited Nos 13 and 15 Dental Units, the RCDC School and No 1 Dental Equipment Depot during the period 22 Jan-9 Feb to familiarize RCDC personnel with current trades training policies.

Special Events

The Christmas party was held at the Sr NCOs' Mess, HMCS Carleton, on 15 Dec 67. Those attending included all RCDC military and civilian personnel in the Ottawa area.

Retirement

Lt-Col "Al" Brusso has retired from the Forces after 28 years of service with the Corps. He enlisted in 1940, came up through the ranks and was commissioned Lieutenant (QM) in 1944. Prior to coming to the Division as Senior Procurement Officer he was Commanding Officer of No 1 Dental Equipment Depot. Best wishes go with Al as he commences a new career with the Federal Department of Energy Mines and Resources in Calgary, Alberta.



Brigadier General BP Kearney
presents the Corps Crest to
Lt-Col AW Brusso on his
retirement

Special Events

11 Dent Unit

All RCDC personnel in the Victoria area attended a Christmas party and dinner dance at the Oak Bay Marina on 15 Dec 67. Suitable presentations were made on behalf of all ranks to WO2 Gourlay and Cpl Sharp, the former retiring after many years of service and the latter on release. The presence of Lt-Col GE Shragge, Maj FM Murray and Miss May Warnock lent a great deal of nostalgia to the occasion.

Cpl North RC Dent Assistant CFS Whitehorse received his promotion under rather odd circumstances. The CO of the Station decided that the occasion of the Sgts' at home to the Cpls would be most appropriate, but since no army stripes were available, airforce stripes were deemed suitable. Thus, with blue stripes an army private became corporal in a Sgts' Mess on an airforce station.

Sports

Capt McRae of CFB Comox and his partner won the Zone 1 BC Badminton Championship in December. Capt McRae also was runner up in the singles competition.

Sgt "Scotty" Walker was a member of the CFB Edmonton Soccer Team which won the Canadian Forces Soccer Championship, held in St Jean Que, Oct 10-13, 1967. It was an all-Western final, with Edmonton squeezing out HMCS Naden 2 to 1.



CFB Edmonton Soccer Team after final match. Sgt Walker first left of trophy.

Retirements

Two "long time members" of the Corps are joining the ranks of the retired.

Major "Larry" Kelly enlisted in the Active Force in 1940, transferred to the RCAF in 1941 and served as a "blue job" until 1946. After completing his course in Dentistry he was commissioned in the RCDC in 1956. It is believed that Larry will be establishing a dental practice in Chilliwack, B.C. Best wishes are extended to him in this endeavour.

WO2 "Perce" Gourlay has had 28 years of service with the Corps. Having served in a great variety of postings and as a dental assistant with innumerable dental officers during that long period, needless to say Perce is well known throughout the Corps. It is believed that he is retiring in Victoria, B.C. and best wishes go to him and his family from his many friends.

12 Dent Unit

Special Events

During October the dental clinic at CFB Galetown was visited by 200 officers from the Canadian Forces Staff College. For this occasion a mobile dental van was set up and manned for display.

A very pleasant Christmas party was held in the form of a supper dance in the Gorsebrook (Halifax) Recreation Hall on 15 Dec 67. Besides those from Halifax there were five couples from Cornwallis and two couples from Greenwood in attendance. Special guests included Col AT Roger and Sgt DLG Flesher.

It was reported from CFB Cornwallis that WOI Shiner organized the pre-Christmas Annual Turkey Shoot for the third successive season. Strangely enough he has "won" a turkey each time. Obviously, he's an expert in this field of endeavour.

An interesting item from the Gagetown clinic with reference to the 30.9 inch snowfall on 4-5 Dec stated: "The drifts were wondrous to behold and many cars were completely buried."

13 Dent Unit

Special Events

Lt-Col JM Smith and Maj HG Bunston attended the laying of the corner-stone of the Dental Science Building, University of Western Ontario, on 20 Oct 67.

Appointment of Interest

Dr WR Cunningham has been appointed Director of the School Dental Service in London, Ontario, succeeding the late Dr HL (Hum) Harris.

14 Dent Unit

Conferences and Meetings

Major General Robert B Shira, Chief US Army Dental Corps, was guest lecturer at an all day meeting of the Alpha Omega Dental Society of Winnipeg - 4 Nov 67. All RCDC dental officers in Winnipeg and the outlying areas were in attendance.

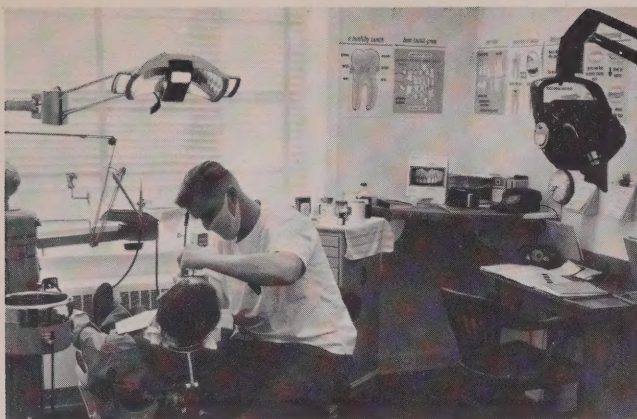
Accommodation

No 11 Dental Clinic CFB Moose Jaw has taken on a "new look" since the completion of renovations. It is located in the Base Hospital and it is designed for efficiency. It contains three spacious operating bays and a separately located bay for the dental therapist. No 11 clinic staff invite RCDC personnel who might be passing through Moose Jaw to have the "conducted tour" of the new clinic.



No 11 Dental Clinic Staff

L to R - Sgt LH Pion, Sgt RB Johnson, Maj JJB Houde, Capt FH Harreman, Sgt G Shechosky, Cpl BG Bristow



Sgt RB Johnson, Dental Therapist, at work in his operating bay

Special Events

The Unit Christmas party was held at CFB Winnipeg 15 Dec 67 with 89 in attendance. Everyone enjoyed the sociability of friends, good food and good music.

Capt JA Boucher has been elected Mayor of the PMQ Council of Pinemuta Park, CFS Gypsumville, Manitoba.

15 Dent Unit

Special Events

On the evening of 11 Dec 67 the RCDC officers in the Montreal area hosted the All Ranks Christmas Party at the Social Centre, CFB St Hubert. The Master Chef, Colonel Cornish, carved a large turkey and was the good humour man of the evening. Capt Charron and his orchestra supplied the music for a well attended evening of dancing and gaiety.

1 Dent Unit

New Equipment

In pilot studies being undertaken by the Corps, both Pyroplast and Ceramco equipment have been installed in the ceramics laboratory at No 1 Clinic CFHQ. The first Pyroplast crown was fabricated on 19 Dec 67 with good results.

In the near future a porcelain bonded to gold service on a limited basis will become available to dental officers throughout the Corps. Units will be notified regarding details of its availability.

1 Dent Eqpt Dep

Special Events

On 15 Dec 67 the personnel of 1 DED and No 3 Dental Clinic had a very successful Christmas party.

On 20 Dec 67 the children's party was held with Santa Bob Mills once again doing the honours.

The RCDC School

Training

Dental Assistant Pay Level 3 Course - 10 Oct-8 Dec 68



Front row L to R - Cpl Braslins IA, Cpl Jack A, WOL TL Batten, Lt-Col Andrews, Col GR Covey, Maj JN Wright, Sgt Fathers GN, Cpl Hatcher IR

Centre row L to R - LAW Audet MFE, Cpl Swiatkevich VH, AW2 Kidd LC, AW2 Tucker BR, AW2 Lemoine BA, Cpl Hache MJV, AW2 McEllistron SAF, AW2 Morton GD, AW2 Kent MM, AW2 Cook MA, LAW Acres CJ

Back row L to R - Ptes Muir JA, Clarke RM Cpl Armstrong PJ, Ptes Morphet DJ, Calnen RD, Mr DJ McDonnell, Cpl Parent TJ, Ptes Allen DG, Dale JE, Cooper TJM, Eden DM

Dental Laboratory Technician Pay Level 4 Course - 28 Aug-15 Dec 67



Front row L to R - Sgt Hossdorf J, Lt-Col AG Andrews, Col GR Covey, Lt-Col PS Sills, Capt DD Robertson, Sgt Rothwell KS

Centre row L to R - Cpls Lindsay RS, Walker JM, Pte Cloutier JRA, Cpls Tallack RJ, Renwick WH, Pte Arbour JMM

Back row L to R - Cpls Timmers PAG, McKenzie JN, Maelde P, Feeney DC, Anderson GM, Taylor TH



Seated L to R - Maj NH Andrews; Lt-Col AG Andrews; Maj AG Taylor
Standing L to R - Capt RB Andrews, Capt JO Strom, Capt WG Ebert, Capt JR Cowan, Capt
ICM Wambara, Capt JR Robertson

Conferences and Meetings

The Kente Chapter of the Academy of General Dentists from the Bay of Quinte District held its Fall meeting at the RCDC School with 20 members in attendance. A familiarization tour of the facilities was followed by a series of clinical presentations by members of the staff.

Lt-Col AG Andrews presented a paper entitled "The Role of the RCDC Dental Officer in a Mass Casualty Care Situation" to the Federal Provincial Directors of EMO 13 Oct 67.

Training Assistance

WO2 Morris WD provided training assistance in equipment maintenance on 2 Nov for 25 civilian dental nurses who are attending a night course in Barrie, Ont. This course is under the auspices of the Muskoka, Grey and Simcoe Dental Society and is headed by Dr Bruce Hudgins of Alliston, Ont. All were most appreciative of the assistance given by the RCDC School.

On 24 Nov 67, Dr QP Sykora, Associate Professor of Partial Denture Prosthodontics at the Dental Faculty of McGill University, presented an afternoon program to the Officers Clinical Course on "Treatment Planning".

Special Events

The Dent A class held a "hope-I-pass" party for the staff in the Base Social Centre on 29 Nov. The inclusion of the female element in the course added considerably to the success of the party.

The officers held their Christmas party for all members of the RCDC School on 20 Dec 67.

4 Fd Dent Coy

Conferences and Meetings

Lt-Col Protheroe visited No 4 Fd Dent Coy 22-23 Nov 67 and addressed the professional study group on "clinic management".

The regular professional study group meeting was held in Fort Henry on 13 Dec. Capts Swanzey and Hill led discussions on preventive dentistry based on Admiral Kyes' paper entitled "Three Ways to Beat the Nation's Dental Problem: Two Good Old Nags and a New Charger". Maj Deyette also addressed the group - on Laboratory Services in the RCDC.

On the same date the NCO study group met, with Sgt Wylie addressing the group on Administration. The meeting took the form of a question and answer session.

The USAEUR Dental Conference was held in Garmisch, Germany 5-7 Oct 67. Lt-Col Richardson, Maj Deyette and Capt Hill attended.

Sports

No 4 Field Dental Company have been allocated two sheets of curling ice every Tuesday afternoon for their unit sports program. Good use has been made of this ice time to prepare four rinks to meet a challenge from 35 Field Dental Unit.

Capt Swanzey - Judo Champion

Capt AN Swanzey was a member of the 4th Canadian Infantry Brigade judo team which competed in British Army on the Rhine judo individual and team championships. He was winner of the individual light heavyweight competition.

Capt Swanzey was also a member of the nine-man Canadian team which participated in the International Military Judo Championships in Ostend, Belgium. Part of the report by Capt Swanzey on that event follows.

The tournament was sponsored by the International Military Sports Council, an organization of 40 member countries set up to promote and administer sporting activities among the Armed Forces of the World. The Belgian Armed Forces hosted the tournament in the city of Ostend and teams from six countries competed.

Capt Swanzey (right) in action

Off the mats, we were well taken care of. Accommodation was excellent, and the Belgian cuisine made mealtime a treat. Following the competitions, tours of the area, including Ypres, Bruges, and Brussels were organized by our hosts.



One of the Council's objectives is fostering international goodwill through sporting activities and in this context the judo tournament was a rousing success.

Special Events

4 Fd Dent Coy held its Christmas party in The Old Red Patch Club in Soest on 19 Dec 67. The entertainment members of the NCO Study Group made the arrangements for this excellent and successful party.

35 Fd Dent Unit

Treatment

A dental team comprised of Maj JLY Cyrenne and Cpl MN Boles provided treatment for service personnel and dependents at AWU in Sardinia during the period 3-17 Nov 67.

Accommodation

The newly renovated clinic at 4 Wing, Baden Soellingen, was officially opened by G/C Allison, Co of 4 Wing on 10 Nov 67.



G/C Allison cutting the ribbon

L to R - Cpl F Schmaltz, W/C Murphy (CADO), S/L Kelly (WCBO), Maj Legendre (Sr Dent O), S/L Berry (SMO), G/C Allison (CO), Capt Cooper (DO), Lt Carrier, Cpl J Patterson

The official opening was followed by an informal party which was attended by the clinic staff and members of the RCAF who had contributed to the new clinic.

Special Events

One of the highlights of social life in 35 Field Dental Unit this year was the Mixed Christmas Party held on 9 Dec in a Gasthaus near 4 Wing. 58 persons enjoyed a dinner-dance complete with "live" music. In the German tradition St Nickolaus and Black Peter made an appearance and everyone attending received a gift from St Nick and some a piece of coal from Black Peter for "misdemeanours" during the year.

Dent Det Cyprus

The following word picture of life with the Canadian Contingent in Cyprus was submitted recently by Capt JG Thompson, OIC Dental Detachment. -

The beautiful Island of Cyprus is in the midst of its rainy season - converting the great stretches of barren brown to refreshing green. Until last month, the lack of green had seemed overwhelming since leaving Canada. Even the towns have taken on a festive air with gaily coloured yards of orange, lemon, grapefruit and tangerine trees loaded with ripe fruit, interspersed with large bushes of brilliant poinsettias.

But who said to leave the winter gear behind? All buildings have been supplied with portable propane heaters. The dental clinic failed to get one at first. After the second day of temperatures in the high thirties, with each instrument feeling like an elongated piece of ice, the clinic was closed for a day until a heater was supplied. Outdoor temperatures range from near freezing at night to crisp sunny

days. But occasionally a warm spell of two or three days comes along with 70 degree sunny warmth - ideal for tennis. New Year's Day was one just such as that.

The Canadian Dental Detachment has entered into a variety of activities as a group. Capt Thompson, Sgt Bleakney and Cpl Beauchamp have visited dental clinics in the Austrian Field Hospital, the Danish Contingent and the British Sovereign Base Dhekelia. The British, of course, have extensive accommodations. The Austrian dentists returned the visit and enviously expressed praise of our large, bright clinic and lab. The Danish set-up is fairly rudimentary, being composed of a field kit (without airtor) in a hospital room. The liaison between different nationalities has been very rewarding.

Using the Finnish sauna bath is a social activity, and during these cool evenings closely resembles the true Scandinavian sauna. In the early fall before the weather turned cool we swam and made use of the many beautiful beaches. One can swim on the north shore of the Island - the water temperature being fine but the air freezing. The Island is also a treasure of beautiful scenery which is ideal for the camera enthusiast.

The political and military situation became very tense in Cyprus toward the latter part of November. The disarmament of UN personnel at Ayios Therodoros and Kiphinou by the Greek Nationalists, and the ensuing massacre of Turkish Cypriots created a situation in which we expected an invasion from Turkey at each sunrise for about a week. All personnel were confined to camp and a full working day, seven days a week, was enforced. Everyone was tense but resolute and ready for the worst. Preparations were made for refugees but fortunately were not required. Each morning at dawn many alarm clocks went off, but with no sounds of planes, an uneasy sleep was continued. Then, as quickly as it arose, the gravity of the situation subsided mainly through the efforts of Mr Cyrus Vance. Downtown Nicosia, which had been practically deserted, filled with pre-Christmas shopping crowds of local citizens and servicemen, happy that their two-week confinement had ended. Most bans have been lifted now and travel is back to normal. A spirit of relief with hope for a peaceful future is generally felt.

Professional Training

RCDC School - Canadian Forces Base Borden

Officers Clinical Courses

Removable Partial Dentures - 15-28 Nov 1967

Majs CL Gullekson, HK Meisner; Cpts CJM Boston, DNH Charles, JPDC Grise, HJ Nadeau

Operative Dentistry - 10-23 Jan 1968

Cpts WG Ebert, JR Robertson, IC Wambara, RB Andrews, JR Cowan, JO Strom

Periodontics - 1-14 Feb 1968

Majs JJ Walker, JFA Marcell, JORR Roy, NH Andrews, JJB Houde; Capt RE Warren

University of Michigan, Ann Arbor, Michigan, USA

Maj DH Skinner	- Endodontics	- 27 Nov-8 Dec 67
Capt HA Pankratz	- Interceptive Orthodontics-	29 Jan-2 Feb 68

US Naval Dental School - Bethesda, Maryland, USA

Capt JD McCallum	- Oral Surgery	- 15 Jan-1 Mar 68
Capt GS Zwicker	- Oral Surgery	- 15 Jan-19 Jan 68
Capt EH Harrenan	- Oral Pathology	- 8 Jan-12 Jan 68

ENT Air Force Base - Colorado Springs, Colorado, USA

Maj WR Collier	- Oral Surgery	- 15 Jan-26 Jan 68
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Cdn Forces Staff Course - Toronto - 11 Sep-15 Dec 67

Capt PR McQueen	
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Training

RCDC School - Canadian Forces Base Borden

Dental Laboratory Technician Level 6 Course - 8 Jan-23 Feb 1968

Sgts McCurdie HM, Borden EB, Hughes DC, Davies DJ, Forsythe C

No 1 Dental Equipment Depot - Canadian Forces Base Petawawa

Conversion Course Dental Storeman Group 3 to DEM Technician - 8 Jan-29 Mar 68

SSgts Strub AL, Jermain EA, Green AH; Sgt Schmelzle CE

JF Jelenko Co., New Rochelle, NY, USA

Ceramco Porcelain - Gold Techniques - 27 Nov-1 Dec 67

Sgt Hill WE

Ritter Training School, Rochester, NY, USA

Ritter Equipment Course - 6-10 Nov 67

WO2 Stewart RG; Sgt Pozyluzny SD; Cpl Boulianne JAL

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

AWL Brayton JE; LAW Boucher RM; Cpls Daniels MM, Gilkes BA, Overbye LA; WO Janz SM, WO Manuge TD; Mrs Kelso, Mrs Mantle, Mrs Byrne

Promotions

To Lt-Col - JW Fletcher
To WO2 - Smallshaw KJ, Marchand JF
To SSgt - Jermain EA, DeBlois JRA, King HC, MacPhee JG, MacDonald JG, Pozyluzny SD, Peterson PD, Green AH, Neill RA, Hossdorf J
To Sgt - Hill JG, Garnham RA, Lindsay RS, Hardy DH, Davies DJ, McKinnon HJ, Veinot RD
To Cpl - North RC

Retirements and Releases

Majors PP Morin, LE Kelly; Lt-Col AW Brusso; WO2 Gourley FL; Sgt Wilkinson GW; Cpls Sharp HB, Horne WD, Palmer WG, Burns AM; Pte Baxter HE; AW2 Dirkson RJ; Miss MF Roberge, Miss A Loucks; Dr H Brown (Pt 5)

Vital Statistics

Marriages

Sgt Olynky W to Miss MJ Hache; Sgt Bussieres PR to Miss F Parent; Cpl MacGillivray HJ to Miss Carolyn Fales; Pte James TA to Miss Wendy Patricia Adams, Pte Brophy GL to Miss Nancy Peters, Pte Hurley AD to Miss Laura Louise Beaupre, Pte Dale JE to Miss Beverly Joan Derkson

Births

Son - Major & Mrs TC Gaudet, Major & Mrs JJB Houde, (adopted); Capt & Mrs WD Fiolek, Capt & Mrs DL Poy, Capt & Mrs NS Misura, Capt & Mrs MB Fisk, Capt & Mrs ED Cragg, Capt & Mrs JAAL Carrier; Sgt & Mrs A Pink, Sgt & Mrs B Hannay; Cpl & Mrs NL Highfield

Daughter - Capt & Mrs AJC Gagnon, Capt & Mrs JHGR Charron, Capt & Mrs JWC Walls; Cpl & Mrs RC Wormington, Cpl & Mrs A Busse

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The

ROYAL CANADIAN DENTAL CORPS

Quarterly

A



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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

Editorial Board: COL JW Turner
LCOL G MacDougall
MAJ JVP Chatwin

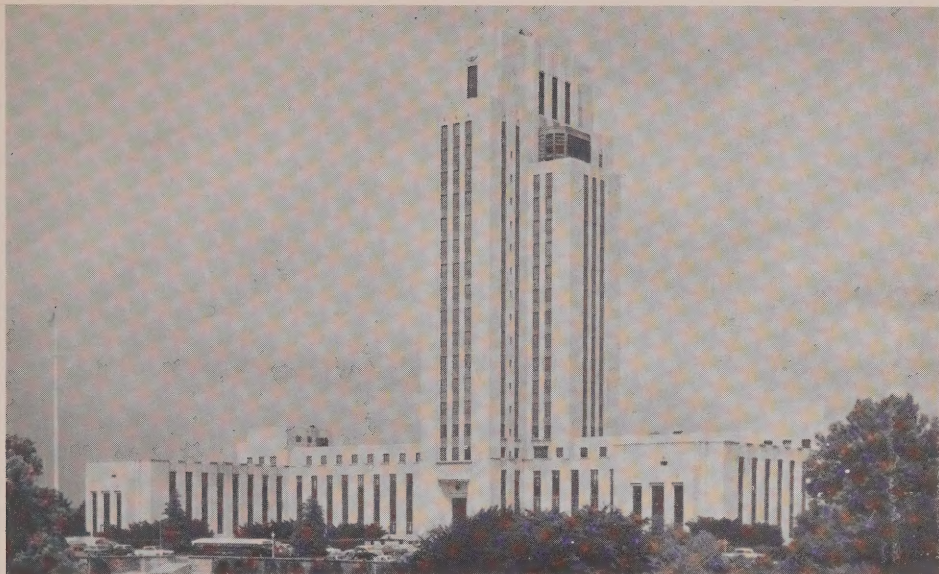
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RCDC Bonspiel - 1968



The National Naval Medical Center

The Naval Dental School occupies the left wing of the National Naval Medical Center. This section houses the clinical and administrative department of the School.

THE US NAVAL DENTAL SCHOOL

The Naval Dental School is one of six separate commands of the National Naval Medical Center, an imposing structure located on a 242-acre site in the rolling hills of Maryland, about a mile north of Bethesda, Maryland. President Franklin D. Roosevelt made the first rough sketch of the elevation and ground plan for the main building and chose the site, then a run-down farm across Rockville Pike (U.S. Highway 240) from the National Institutes of Health. Below the slight elevation where the new building would stand was a springhouse, its tiny pool fed by natural springs. Being reminded of the Pool of Bethesda, the President directed that the springs be preserved and that the pool be made a part of the landscaping.

The Secretary of the Navy officially commissioned the newly constructed buildings in February, 1942, and designated the medical and dental facilities that were to occupy it as the National Naval Medical Center. On the 100th anniversary of the Bureau of Medicine and Surgery, August 31, 1942, President Roosevelt formally dedicated the Center.

At that time, the Center included only the Naval Hospital, the Naval Medical

*Editor's Note

The January 1968 issue of the Quarterly contained a feature article on the Walter Reed Army Medical Center and the opportunities in specialized training offered by that Institution to RDC Officers over the years.

This issue of the Quarterly features a "sister" article on the U.S. Naval Dental School in recognition of the invaluable training in the form of both short and extended post-graduate courses which members of the Corps have been privileged to attend.

School, and the Naval Dental School. Later, additional buildings were constructed on other parts of the grounds for medical facilities commissioned at later dates. These are the Naval School of Hospital Administration, the Naval Medical Research Institute, and the Navy Toxicology Unit, as well as the following tenant activities: The Naval Medical Data Services Center, the Children's Diagnostic and Study Unit, and the Armed Forces Radiobiology Research Institute.

Because the Naval Dental School is affiliated with Georgetown University as an off-campus branch of the Graduate School, its faculty includes instructors from the University as well as staff dental officers, many of whom hold diplomas or certificates from the American specialty boards in dentistry. Staff dental officers serve on the faculties of Georgetown and other civilian dental schools, and outstanding educators in various fields from throughout the country lecture at the Naval Dental School.

Officer Education

There are no undergraduate courses, for the School enrolls only carefully selected officers who have been practicing dentistry in the Navy for at least five years.

Courses offered during the first year of the Graduate Program are of 10 months' duration and are popularly called The Graduate Courses. During this first year, graduate students learn the latest techniques of practicing and teaching dentistry. They also study biomedical sciences--biochemistry, anatomy, pharmacology, microbiology, physiology, and pathology--for which they receive 13 credits toward a Master of Science degree from Georgetown University. At the same time, the student officers work with their instructors in the clinics and laboratories.



Two of the three Dental School buildings (122 and 123). The educational programs are conducted in Building 122, and a new preventive dentistry clinic operates in Building 123 (far right).

Three laboratories are staffed by scientists who devote their time to research in biochemistry, microbiology, and oral pathology. Since the Naval Dental School provides an oral pathological service for the entire Navy, dental officers throughout the world send tissue specimens, accompanied by descriptions of the lesions and case histories, to the Oral Pathology Department for diagnosis. By studying these specimens many of which they would be unlikely to see elsewhere, students learn the clinical and microscopic signs that will help them diagnose rare and unusual diseases. Student officers also study research methodology and biostatistics while working on

a research study of their choice.

Those who show special aptitude and skill during the first year of the Graduate Program are given advanced training in one of the specialties.

All dental officers must continue their education to keep informed of the many new developments in dentistry. Each year, the Naval Dental School offers 1-week courses in 11 dental specialties to dental officers of all the U.S. Armed Forces, the Public Health Service, the Veterans' Administration, and the Royal Canadian Dental Corps. It also makes 7-week courses available to officers of the Royal Canadian Dental Corps, in oral surgery, periodontics, and prosthodontics. Since 1949, about 100 officers of the Royal Canadian Dental Corps have attended continuing education courses, observerships, and specially designed courses.

For those who cannot attend courses in residence, the School has a correspondence course program of professional courses and a single course on the Navy's administrative practices as they apply to dentistry. These courses are developed and administered by the School for Career and Reserve dental officers of the U.S. Armed Forces; and the enrollment of dentists in other Federal agencies and the armed forces of other nations is encouraged. At present about 30 officers of the Royal Canadian Dental Corps are enrolled.

The following professional courses are available:

- Advanced Speeds in Operative Dentistry, NavPers 10420-A
- Complete Dentures, NavPers 10763-1
- Diagnosis of Lesions of the Oral Mucous Membrane, NavPers 10421
- Endodontics, NavPers 10407-A
- Fixed Prosthesis, NavPers 10410
- General Oral Surgical Procedures and Exodontia, NavPers 10729-A
- Health of Supporting Tissues in Complete Denture Construction, NavPers 10419
- Oral Diagnosis, NavPers 10739-1
- Periodontics, NavPers 10758-1
- Removable Partial Dentures, NavPers 10764-A
- Removable Partial Dentures: Planning and Design, NavPers 10511

A new course in Pharmacotherapeutics in Dental Practice is under development and the present course in Endodontics is being revised. At any given time, some 1000 dental officers are enrolled in the professional courses.

Enlisted Education

With the help of capable assistants, naval dental officers can more than double their professional workload. To train these assistants the Navy conducts schools in dental assisting and prosthetic techniques for enlisted personnel. After receiving such training, qualified dental technicians may attend one of three advanced specialized schools conducted at the Naval Dental School.

The Research Assistant School offers courses in the care of experimental animals and in assisting dental officers engaged in research involving experimental pathology, experimental surgery, microbiology, biochemistry, and microphotography. In the Maxillofacial Prosthetic School, students learn to make artificial plastic eyes and various other prostheses for the mouth, head, and face; to create these prostheses, students must have artistic ability and sensitive color perception. The Dental Repair School meets the Navy's need for men to install, maintain, and repair all types of dental operating room and laboratory equipment on ships and at shore stations. Among the qualifications for this school are manual dexterity, mechanical aptitude, and completion of a course at Electrician's Mate School.

Other Educational Functions

Always seeking to improve the School's educational programs, the staff pioneered

in the use of audiovisual education. Today, television is an everyday teaching medium, and the School's color motion pictures, television programs, and videotape recordings are used Navy-wide to teach subjects ranging from basic oral hygiene to complex professional techniques. A number of slide-illustrated lectures and microscopic slide collections used in the School's courses are packaged and loaned for individual study by dental officers at other facilities. The School also produces scientific exhibits which are shown at major dental meetings in the United States and foreign countries; many of these have won national awards.



After welcoming the RCDC second lieutenants who visited the Naval Dental School in August 1967, Captain Kenneth L. Urban, Dental Corps, U.S. Navy, Commanding Officer, appears with the group as they started on a tour of the School's facilities. On Captain Urban's right is Major A.G. Taylor, RCDC, who was in charge of the tour.

Since dental personnel render first aid in battle as well as in operating room emergencies, the staff develops functional training aids for casualty care training, some of which are used Navy-wide. Among these is Mr. Disaster, a life-size model military casualty with an artificial heart and synthetic blood, who responds to treatment of fractures, burns, hemorrhages, and other injuries in much the same way a human being would. Mr. Disaster is now manufactured commercially and used in casualty care training by all the Armed Forces, the Civil Defense Agency and many civilian organizations.

In addition to its educational functions, the School provides dental care for military personnel of the National Naval Medical Center, inpatients of the Naval Hospital, and personnel referred from other naval activities; and conducts an expanding preventive dentistry program for military personnel and their dependents.

Besides preparing and presenting formal courses of instruction and carrying on a professional practice in the School's busy dental clinics, staff members serve as

officers of many professional societies; speak at local, national, and international society meetings; conduct research and prepare reports for official use by the Navy and articles for publication in dental journals. Such research led to the lifelike artificial plastic eye that moves with the patient's natural eye, developed by the Maxillofacial Prosthetic Clinic; which also makes prostheses for victims of cleft palate and shattering wounds of the face, and various other body parts that help patients resume normal lives. The pioneer model of the air turbine handpiece now used in all dental operating rooms throughout the world was developed in the Dental School's Repair School, while many other research projects have furthered dental knowledge or contributed to improved dental practices, techniques, and equipment.

Thus, through its educational, clinical, and research programs, the Naval Dental School contributes in many ways to the improved health of US Navy and Marine Corps personnel and others throughout the world.

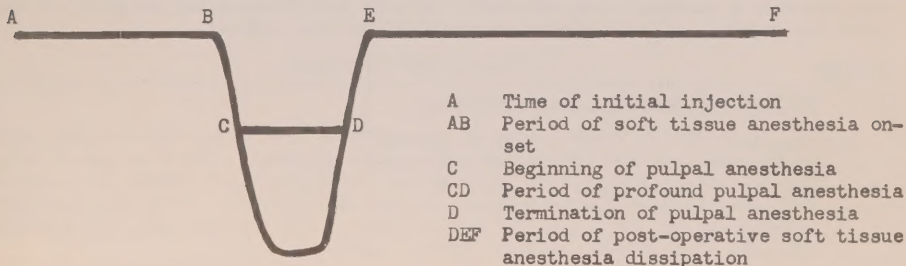
A NEW ALL PURPOSE ANESTHETIC
PRILOCAINE HYDROCHLORIDE 4% WITH EPINEPHRINE 1:200,000

LCOL A.G. Andrews, CD, DDS



The ideal local anesthetic solution which possesses all of the attributes of rapid onset, complete anesthesia with every injection and rapid post operative dissipation free from toxic side effects, does not exist. All local anesthetics being used in Canada, however, possess these individual ideal entities in varying degrees and pharmacologic anesthetic research is continuously directed towards improving the effect or nature of each parameter (Fig. 1).

Fig. 1



The Parameters of Anesthesia

This may be accomplished by: altering the chemical structure of the free anesthetic base, employing totally different chemical structures; by increasing or decreasing the percent concentration of the vaso constrictor; by elimination of the vaso constrictor; by combining chemically different vaso constrictors; or by modify-

ing the percent concentration of the anesthetic solution itself. Unfortunately, when a refinement is acquired in one parameter an undesirable effect often results in another, for such is the reactive nature of human tissue to chemical solutions.

Prilocaine hydrochloride 4% with epinephrine 1:200,000 (CITANEST FORTE^{*}) is a new local anesthetic which was created by the manufacturer to produce better or different effects in three parameters, when used for local infiltration injections. These features were defined as (1) faster onset, (2) same depth of pulpal anesthesia but a shorter operative period, and (3) shorter post-operative dissipation period than a designated standard lidocaine hydrochloride 2% with epinephrine 1:100,000.

Composition and Properties

Prilocaine is similar to lidocaine in that both are amides but chemically dissimilar in that prilocaine is a toluidine derivative and lidocaine, a xylylidide derivative. It is slightly soluble in water and freely soluble in alcohol. Aqueous solutions are stable and can withstand boiling and auto-claving without decomposition.²

Animal Toxicity and Human Tolerance

In animal studies, Wiedling² demonstrated that the acute toxicity of prilocaine was about 40 percent less than that of lidocaine and it was therefore surmised that the safety coefficient was proportionately increased. Englesson et al³ investigated human tolerance to intravenous injections of both lidocaine and prilocaine in twenty volunteers by means of a double blind study and provided evidence that prilocaine was tolerated twice as well as was lidocaine.

Clinical Trial

Prilocaine hydrochloride 4% with epinephrine 1:200,000 was recently evaluated in a Royal Canadian Dental Corps clinical trial to examine its relative performance in three parameters with that of the standard now being used, lidocaine hydrochloride 2% with epinephrine 1:100,000. The three parameters were designated, onset, operative, and post-operative periods.

The study was carried out in four different clinics and the double blind method was employed. Each of the participating dentists was instructed to employ a common injection technique, and to standardize the total volume whenever it was practical to do so. Characteristics pertaining to the patient and to the procedure were noted on a standard protocol sheet, as were the observations of grade of anesthesia, onset and duration of soft tissue anesthesia, and side effects.

Results

A. Patient and Practice Characteristics

As shown in TABLE I most of the patients were male, were in good general health and required restorative procedures primarily. The mean age of the group was 32 years. Analysis of the practice characteristics (TABLE II) reveals that the average injected was 1.3 ml for infiltration, 1.9 ml for inferior alveolar block and 1.7 ml for mental block. The average time from injection to completion of the procedure was 35 minutes.

B. Frequencies of Various Grades of Anesthesia

The two solutions were used in a representative number of dental operations and included restorative, surgical, periodontic and endodontic procedures with approximately equal success. When the data pertaining to all procedures requiring infiltration were combined (TABLE III) there was no statistical significance between the two solutions.

* CITANEST FORTE 4% (ASTRA Pharmaceuticals)

TABLE I
PATIENT CHARACTERISTICS

Dental Procedures Performed	No.	%	Age	No.	%	Sex	No.	%
Restorative	663	80.9	Under 10	0	0.0	Male	766	96.1
Extraction	98	12.0	10 - 14	0	0.0	Female	31	3.9
Other Surgical	3	0.4	15 - 19	84	12.3	NI*	22	
Periodontal	7	0.8	20 - 29	224	32.8			
Endodontic	14	1.7	30 - 39	176	25.8			
Miscellaneous or NI*	22	2.7	40 - 49	179	26.2			
Restorative & Ext	12	1.5	50 - 59	20	2.9			
			60 - 69	0	0.0			
			70 +	0	0.0			
			NI*	136				
General Health	No.	%	Infection In Area Treated ?	No.	%	No.	Areas Treated	%
Good	774	95.9	Yes	759	95.3	171	Upper Anteriors	21.3
Fair	33	4.1	No	37	4.6	134	Upper Premolar	16.7
Poor	0	0.0	NI*	23		151	Upper Molar	18.8
NI*	12					25**	Upper Quadrants	3.1
							Total Upper Arch	59.9
						24	Lower Anterior	3.0
						61	Lower Premolar	7.6
						219	Lower Molar	27.3
						17**	Lower Quadrants	2.1
							Total Lower Arch	40.0
						17	NI*	

* NI = not indicated; the percentage figures are based on those indicated.

** Either not specified or including more than one segment of arch.

TABLE II
PRACTICE CHARACTERISTICS

Both Solutions	Average Volume Injected	Average Time From Injection To The Beginning Of Work	Average Length Of Procedure	Average Time From Injection To The Completion Of The Procedure
	ml	min	min	min
Infiltration	1.8	4.9	28.4	33.3
Inferior Alveolar Block	1.9	8.5	29.3	37.6
Mental Block	1.7	6.3	23.2	29.8
All Injections Combined	1.8	6.2	28.8	34.9

TABLE III
GRADES OF ANESTHESIA OBTAINED WITH INFILTRATION
DATA FROM ALL PROCEDURES COMBINED

Solution	* Lidocaine HCl 2% Epinephrine 1:100,000		**Prilocaine HCl 4% Epinephrine 1:200,000	
	No.	%	No.	%
Complete	213	92.6	210	90.1
Complete Wear Off	1	0.4	6	2.6
Partial	11	4.8	16	6.9
Failure	5	2.2	1	0.4
Not Indicated *	16		29	
Total	246		262	

* Percentages are based on those indicated.

When the data pertaining to all procedures carried out under inferior alveolar block were combined (TABLE IV), there was no statistical difference between the solutions.

TABLE IV
GRADES OF ANESTHESIA OBTAINED WITH INFERIOR ALVEOLAR BLOCK
DATA FROM ALL PROCEDURES COMBINED

Solution	* Lidocaine HCl 2% Epinephrine 1:100,000		**Prilocaine HCl 4% Epinephrine 1:200,000	
	No.	%	No.	%
Complete	103	79.2	114	82.6
Complete Wear Off	0	0.0	1	0.7
Partial	10	7.7	12	8.7
Failure	17	13.1	11	8.0
Not Indicated *	12		14	
Total	142		152	

* Percentages are based on those indicated.

It should be noted, however, that when the frequency of complete anesthesia and that of all other categories combined were compared for the two solutions, there was a larger percentage of failures in the cases treated with lidocaine than in those treated with prilocaïne.

C. Soft Tissue Anesthesia

The average durations of soft tissue anesthesia are given in TABLE V. For infiltration anesthesia, this duration was 25 minutes less following the prilocaïne solution than following the lidocaine solution, the difference being statistically highly significant.

* Lidocaine HCl - Xylocaine HCl

** Prilocaine HCl - Citanest

TABLE V

DURATION OF SOFT TISSUE ANESTHESIA
(Minutes)(Mean $\pm$ Standard Deviation)

	Lidocaine HCl 2% Epinephrine 1:100,000	Prilocaine HCl 4% Epinephrine 1:200,000
Infiltration N =	152.8 $\pm$ 36.6 219	127.7 $\pm$ 41.9 238
	t = 6.78 P < 0.01	
Inferior Alveolar Block N =	195.2 $\pm$ 42.4 114	200.1 $\pm$ 49.4 124
	t = 0.787 P is not significant	
Mental Block N =	186.2 $\pm$ 28.4 4	133.0 $\pm$ 53.5 3
All Injections Combined N =	167.1 $\pm$ 43.7 339	151.9 $\pm$ 56.3 368
	t = 4.088 P < 0.01	

No significant difference was observed after inferior alveolar block and the data for mental block were too few for analysis. When the data pertaining to all injections were combined, the duration of soft tissue anesthesia was 16 minutes shorter for the prilocaine solution than for the lidocaine solution, the difference again being statistically highly significant.

D. Anesthesia Onset

The time of onset of anesthesia was defined as the time from injection to the onset of operative numbness. As will be noted in TABLE VI, the time of onset for the prilocaine solution was significantly shorter than the time of onset for the lidocaine solution during both infiltration and inferior block procedures.

E. Side Effects

The number of reported systemic and local side effects was small and no statistical difference between the two solutions was observed.

TABLE VI
TIME OF ONSET OF ANESTHESIA
(Minutes)

(Mean $\pm$ Standard Deviation)

	Lidocaine HCl 2% Epinephrine 1:100,000			Prilocaine HCl 4% Epinephrine 1:200,000		
Infiltration N =	1.9	$\pm$	1.9	1.5	$\pm$	1.5
	200			259		
	t = 2.74			P < 0.01		
Inferior Alveolar Block N =	4.4	$\pm$	3.9	3.2	$\pm$	3.0
	121			141		
	t = 2.69			P < 0.01		
Mental Block N =	1.3	$\pm$	0.5	1.3	$\pm$	0.6
	6			3		
All Injections Combined N =	2.8	$\pm$	3.0	2.1	$\pm$	2.3
	327			408		
	t = 3.72			P < 0.01		

F. Overall Impression

The overall impression of the trial solutions is presented in TABLE VII. In this classification the investigator and responsible clinicians took into account the frequency of successful anesthesia, the onset time, the depth of anesthesia and any side effects. The data indicate that the classification of a grade of anesthesia as "complete" does not necessarily mean that the same case will also be classified as "excellent" in its general impression. It should be noted that, although the percentages of "excellent" responses were lower than the percentages of "complete" anesthesia, the percentages of "poor" responses were essentially the same as the percentages of "failure" to achieve anesthesia.

TABLE VII
GENERAL IMPRESSION OF ANESTHETIC

	Lidocaine HCl 2% Epinephrine 1:100,000		Prilocaine HCl 4% Epinephrine 1:200,000	
Infiltration	No.	%	No.	%
Excellent	131	58.0	129	54.3
Adequate	85	37.6	97	40.9
Poor	10	4.4	11	4.7
Not Indicated *	20		25	
Total	246		262	
Inferior Alveolar Block				
Excellent	62	53.4	74	57.4
Adequate	48	41.4	45	34.9
Poor	6	5.2	10	7.7
Not Indicated *	26		23	
Mental Block				
Excellent	2	50.0	3	100.0
Adequate	1	25.0	0	0.0
Poor	1	25.0	0	0.0
Not Indicated *	2		0	
Total	6		3	

* Percentages are based on those indicated.

Summary

The practice characteristics presented in these statistics tend to indicate that most "routine" operative procedures requiring local infiltration anesthesia, involve a relatively short period of time during which tissue is being cut and traumatized. When prilocaine hydrochloride 4% with epinephrine 1:200,000 is employed as the agent it possesses the same relative properties as standard lidocaine hydrochloride and provides adequate anesthetic coverage.

Since the sum of all parameter characteristics for the test solution includes the benefit of relatively shorter duration, it may be concluded that the new agent possesses this additional advantage.

No significant differences were noted for inferior alveolar block anesthesia.

If subsequent trials confirm the results of this evaluation, prilocaine hydrochloride could be classified a reliable short-acting, selective anesthetic solution.

"The opinions expressed in this article are those of the author and do not reflect endorsement of this product by the Director General of Dental Services for the Canadian Forces or the Department of National Defence."

1. Löfgren, N., and Tegner, C. Studies on local anesthetics; a new useful local anesthetic. Acta Chem Scand, 14:486, 1960.

2. Wiedling, S. A new local anesthetic. Acta Pharmacol (KBH), 17:233, 1960.
3. Englessen, S., Eriksson, E., Wahlqvist, S., and Ortengren, B. Differences in tolerance to intravenous Xylocaine and Citanest (L 67) a new local anesthetic; a double blind study in man. First European Congress of Anaesthesiology Proc., Vienna, 2: 1-4, Sep. 1962.

FACIAL WOUNDS

CAPT JD McCallum, DMD



The treatment of facial wounds in a theatre of war is the prime responsibility of the oral surgeon or dental officer, but the benefits of a team approach to total patient care cannot be emphasized too strongly. The restoration of normal function and contour of the injured structures in the facial area are secondary to the treatment of the effects of the total injury.

Due to the increased efficiency of casualty evacuation, casualties that succumbed to their wounds in the past are now reaching aid stations and hospitals in time for emergency treatment. Therefore increasing numbers of casualties survive their wounds and this is reflected in a concomitant increase in the incidence of facial wounds requiring treatment.

With mandibular fractures outnumbering maxillary fractures by about 2 to 1, the dental surgeon is called upon to play an increasingly important role in the treatment of these casualties.

Facial wounds are usually accompanied by life threatening emergencies and these must be given top priority. Intracranial damage and occlusion of the airway commonly occur simultaneously with, or as a result of the facial wound and must be treated first. The priorities for emergency treatment may be considered to be the following:

- a. maintenance of an adequate airway; (if at all in doubt, a tracheotomy should be performed)
- b. check hemorrhage;
- c. treat for shock;
- d. check the level of consciousness.

Treatment for these emergencies is not necessarily the responsibility of the dentist, but he must familiarize himself with them and be prepared to handle them if called upon to do so. Although these are important steps in the treatment of casualties this discussion will deal primarily with the surgical aspect of facial wounds.

High velocity wounds of the face do a great deal of damage to the underlying structures, both to soft and hard tissues. Soft tissues of the face, because of their abundant blood supply, can usually be treated quite successfully if one is careful to observe the principles of: asepsis, careful hemostasis, gentleness in handling tissue, use of correct suture materials, and avoidance of dead spaces.

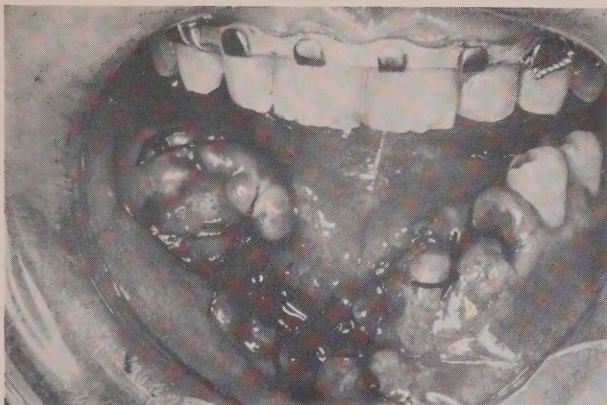


Fig 1

An intra-oral illustration of the exit of a high velocity projectile showing partial post-operative treatment. Note also the type of arch bar used and preferred for intermaxillary stabilization.

Definitive care of facial injuries must await its turn in the priority of treatment, but long delays are seldom necessary. As much as possible should be done at the first operation, not only to obtain the best possible healing, but also to prevent psychic trauma to the patient. With conservative debridement and immediate closure, followed by adequate antibiotic coverage, most facial wounds heal quickly with minimum scarring. Primary care should be accomplished within twelve hours but closure may be delayed for some time if foreign bodies and sources of infection cannot be removed at this time. After sources of infection have been controlled by antibiotic coverage, primary closure may be achieved at a later date. Primary closure without the control of infection may result in sloughing of tissue and a very poor result. Reduction of fractures should not be delayed beyond ten days because fibrous union of bone may make it impossible to achieve accurate reduction. Morale is higher if wounds can be closed early and patients do not have to submit to painful changes of dressings and awkward feeding methods.

Avulsion of bony structures presents a problem different from that of normal fractures. In these cases it is necessary to immobilize the jaws with intermaxillary fixation being careful to obtain the most acceptable occlusion possible. Treatment of the soft tissue wound is carried out, but nothing other than possibly the reduction of associated fractures and debridement of the avulsed bony fragments is done until the soft tissue is completely healed and all infection completely cleared. This may take considerable time.

After all soft tissue healing has occurred and infection controlled, the surgeon will then treat the bony structures with the aim of restoring the function of the jaws and preparing for the best possible support for future prosthetic appliances. It is at this stage that the surgeon must work in close harmony with the prosthodontist for an adequate and functional result.

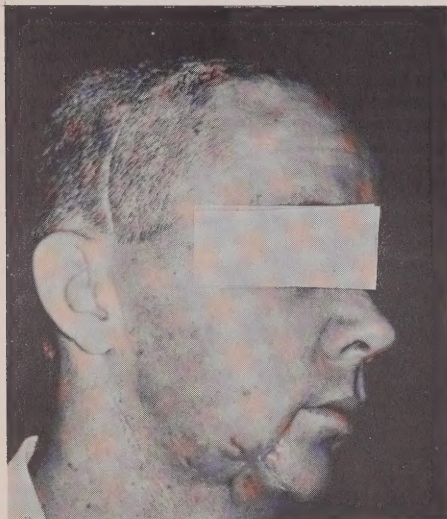


Fig 2

A Panorex radiograph illustrating the amount of bone that may be lost in missile type injuries.

In order to replace the missing bony structures the surgeon has a number of alternatives available to him. Depending on the individual case, the surgeon may regain the structural integrity of the mandible by using a prosthetic implant or a bone graft.

Bone transplants of late have become very successful in treating avulsions of the mandible and these may be done in a variety of ways. Bone may be removed in chips from the ascending ramus of the mandible, the iliac crest, or even a section of rib and relocated in the open area. Freeze dried bone may also be used and incorporated with additional marrow, interspersed throughout the area. The addition of marrow to aid in growth of new bone is under study at present and results of these studies will be forthcoming in the near future. Each case must be considered individually as to the method of bone transplant and the probability of success.



-Fig 3

This is a photograph of the same patient as Fig 2 after successful surgery had been performed to replace the missing part of his mandible. The cosmetic and functional results are pleasing and all that remains is revision of the remaining scars by a plastic surgeon.

Treatment of casualties with avulsions of bone is a complicated procedure and should not be attempted by the untrained, but if done by a qualified and experienced oral surgeon a dramatic and functional result may be achieved.

Summary

In the management of any injury it is essential that the initial evaluation and treatment of the patient be directed toward the effect of the total injury. Total patient care often requires the services of surgical and allied specialties.

Careful cleansing of wounds is a primary essential in their treatment. All foreign bodies should be removed but excision of tissue must be kept to a minimum. Fractured facial bones when exposed through soft tissue wounds should be replaced in their normal position and then immobilized, after which the soft tissue should be repaired.

A successful result following the treatment of facial wounds may depend upon the skill with which normal facial contour and function are restored.

Acknowledgement

The author recently attended post-graduate training in Oral Surgery at the Naval Dental School, NMMC, Bethesda, and this article is based on ideas and information gained while on course.

MODIFICATION OF A STANDARD DENTAL CHAIR INTO A POSTURE CHAIR

Major DJ Carmichael, CD, DMD



Many officers in the Corps don't have the pleasure of operating with a posture chair which provides both convenience for the operator and comfort to the patient.

With the expenditure of only a few cents and little time, the standard chair may be modified to serve as a posture chair. The writer has found that the modification described gives more patient comfort because of air spaces, ease of turning the body, etc.; and much more freedom of movement for the operator because of retention of the standard head rest, back adjustment and arm adjustment.



Fig. 1

standard electric chair
without modification



Fig. 2

standard electric chair
with modification

Construction

On two large pieces of cardboard draw templates (right and left) outlining the contour of the cushion to chair, slope of foot rest and horizontal extension of the foot rest. Mark the templates R and L (right and left) because both sides of the

chair differ in contour. The horizontal extension should be about four inches beyond the chair when the foot-rest is extended.

Cut the templates with scissors along the outline drawn and then hold them to the sides involved to test for snugness of fit.

Three quarters of an inch below the height of the cushion (Fig. 3) mark one of the templates and from this point to the extension of the foot rest area draw a curve, beginning by continuing the cushion extension and then sloping rapidly downward.

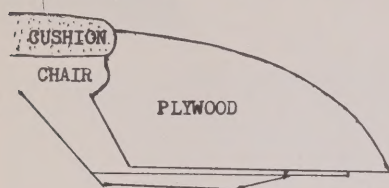


Fig. 3

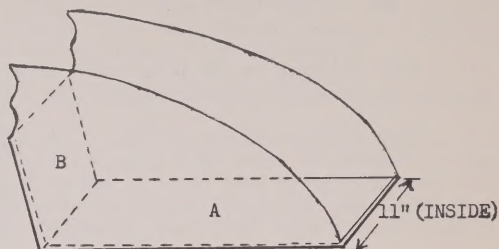


Fig. 4

The completed template is superimposed on the opposite one and both cut to the contour as drawn.

Place the templates on $\frac{3}{4}$ " plywood, trace the outlines, and after having marked them R and L cut them out.

The two pieces of plywood now appear as in Fig 3. Ensure that the pieces are snug when checked in place on the chair. Some filing may be necessary in order to achieve a good fit in the cushion and chair area.

With the wooden sides in position at the widest part of the footrest, measure the inside dimensions (A and B in Fig 4) and cut $\frac{3}{4}$ " plywood to fit.

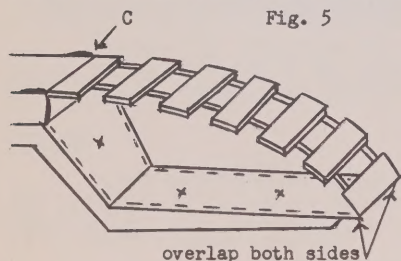


Fig. 5

Using pieces of scrap wood ($\frac{1}{2}$ " thick and 15" long) fill the contour area, placing the slats $\frac{1}{2}$ inch apart and projecting approximately $1\frac{1}{2}$ inches over the edges. (Fig. 5)

Be sure to place the first slat at the cushion end of the contour (C) and proceed towards the foot-rest area.

When satisfied as to fit, all parts are nailed and glued together and permitted to set for at least 24 hours.

When the framework is dry and rigid, a piece of old broadloom is cut to fit the contour - just projecting over the sides. Using a good piece of leatherette, staple and glue it to the lower sides of the projecting slats. Complete the covering by nailing furniture tacks down the sides, neatly fold the corners of the leatherette to prevent unsightliness, and finally tack down the ends.

Drill three holes through the footrest and with 1" screws firmly fix the new attachment to the chair. Paint the sides to harmonize with the unit.

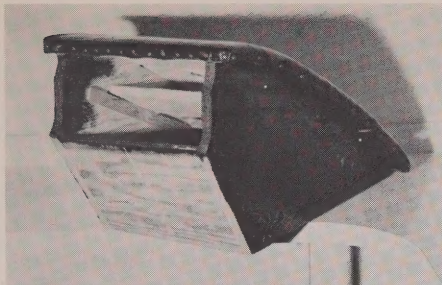


Fig. 6

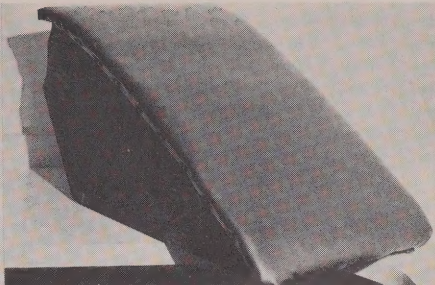


Fig. 7

Conclusion

The construction of a simple modification for the standard dental chair, which in effect converts it into a posture chair, has been described. The cost is minimal and the benefits well worth-while as will be evidenced by your patients' remarks regarding the comfort of the chair. (Fig. 7)

LETTERS TO THE EDITOR

The RCDC Quarterly devotes this section to comments by readers on topics of current interest to Service dentistry. The editor reserves the right to edit all communications to fit available space. Printed communications do not necessarily reflect the opinion or official policy of the Royal Canadian Dental Corps.

Improving A Base Preventive Dentistry Programme

To the Editor:

For several years, in common with the profession in general, our Corps has stressed prevention of dental disease. While it is obvious that interest varies from member to member, the fact remains that the RCDC has a considerable body of highly trained and capable personnel working in the preventive field. It is surprising, therefore, that our years of effort do not show more obvious results although the benefits have undoubtedly been great. The feeling of partial failure has been brought to mind by the results of a modest but continuing local dental health programme and observations of the "average" patient.

What obvious result should be expected? To me, the idea that dental health is a vital, necessary and possible objective should now be known to many of the longer term military personnel, and should be an integral part of the training programme from recruit to senior officer. Gradually, I have come to realize that this is not so. Very often one is still confronted by the old hand who "never heard that before", whether we are talking about diseased tissue under unsatisfactory dentures, oral hygiene techniques, prevention, example through leadership, or individual responsibility for collective military dental health.

The reasons for this are many and some lie in our own failures. This letter offers a few suggestions and comments that may be helpful to those who feel that a preventive programme is an important responsibility of the RCDC.

Recruit training centres offer a challenge for obvious reasons. "Let's start them off right", is the plan. Units usually co-operate. I know of one using unit funds to provide each recruit with a recommended brush in a box with a tube of paste. This same brush, or at least its close relative with nylon bristles (hard and medium) is

available in the local MLS outlets (68¢) and these brushes are in the MLS catalogue. Arrangements can be made for local canteens to buy specific types of brushes but we have to see that there is a demand for them. The monstrous curved head brushes are also available (59¢ and 39¢) and at these lower prices we have to educate our patients to demand the better product and pay for the privilege. The only other solution may be to find some way of having MLS or CANEX stock a recommended brush as a subsidized or non-profit item. We should do something now that the last of the notorious "issue brushes" have gone from the supply chain.

In our program just before recruit training starts, or early in the programme, the local clinic staff present a lecture and demonstration to each new platoon. Two succeeding 50 minute periods are utilized. This is too little time to brain-wash but it is just enough to convince the few partially motivated individuals to practise personal oral physiotherapy. Having had the proper brush issued to them and having replacements available locally makes the lecture and demonstration just a little more meaningful. This is the brush required for the technique taught, and it is of course the brush used in the demonstration.

These two steps are a good start towards a continuous programme but unfortunately it usually stops here for a variety of reasons. The only contact the recruit now has with dentistry, other than his own toothbrush, is his prophylaxis and fluoride application appointment with the therapist and the occasional other visit to the clinic, usually for emergency treatment. Part of the reason for this is that the average instructor in the Forces has no interest whatever in dental health other than when it is forced on him. An invitation to just one recruit graduation dinner is enough to convince the dentist of this fact. As the beer flows more freely so do the "words of wisdom". They are startling and disheartening for anyone interested in the prevention of dental disease.

If only training authorities required a monthly report on dental preventive programmes listing for instance: the number of toothbrushing sessions following meals, the number of men carrying brushes to a field exercise, the number of corporals encouraging proper oral hygiene habits, the number of officers cleaning their mouths after coffee break in the mess; then perhaps our problem would be solved. We could no longer say that if the mouths were as well cared for as personal weapons and barrack blocks we wouldn't have a treatment problem; or that if the teeth were brushed as much as the boots we could get on with the task of catching up on the backlog of dental disease.

I used to be pleased when a unit senior officer showed an interest in his men being dentally fit. Experience has shown though that often all this means is having "work done", that is, dentures, fillings and extractions. Their part in prevention is not appreciated and they feel that their duty is done when the unit has been paraded past a dental officer for a cursory check with a tongue depressor. How often does a CO's parade take priority over any dental appointment on your base? Just try and find out who it was who should have seen that the patient presented, and you will get some idea of how many people from the very junior to the most senior, that we have to convince.

During this same "easily pleased" period I was involved with dental health lectures to relatively large numbers of people. Large numbers in the audience seemed synonymous with success. Such lectures probably do some good depending upon the training aids available and the ability of the speaker but this "one shot" method does not appear to have a great or lasting effect. For the listener, it can be a dull and not very enlightening experience. My attention has always been drawn to the fact that the percentage of each group attending is inversely proportional to their rank. This is usually a case of a bad example being set by superiors who rarely think of dental health and almost never of prevention of dental disease. Diplomacy may be part of the answer. We have to convince the officers and NCOs by reason. We need all the encouragement from higher authority and from non-dental channels that we can muster.

Sometimes reason is hard to apply. We are just a little different as our message does not affect the immediate efficiency of the particular group in question. This

makes the convincing all the harder. We are different too in that the patient's lack of appreciation of his own responsibility for proper oral care shows up in his attitude to the dental staff. If he were going to a medical officer or to a hospital he would probably have a bath or wash his hands or put on clean underwear. This is not so when going to the dentist. For some reason we are expected to lean on a dandruff-laden shoulder, push through an air of "Junglemouth" and have the honour of scraping through layers of hard and soft debris to find the possible source of pain. If we object and become a little annoyed the patient goes back to his unit and complains about the "blast he got from that - - - of a dentist". This is hard to accept from men who get real blasts for far less important things than filthy mouths. When pain results from this patient neglect we are blamed. Thus the approach to our patients, in and out of the chair, must vary according to the patient and to the circumstances of our meeting if any progress is to be made.

Progress in dental health education is slow and time consuming. This year I have approached smaller groups and we have "gone to them" with our message. These smaller groups respond well, probably because they are comfortable in familiar surroundings and the senior people are usually present. Further, they appreciate interest being shown in their particular tasks and they co-operate most willingly. This method causes the least disruption of their routine. When speaking to other than recruits we have found that talks can be broadened in scope to include matters of interest concerning dentistry in general. Prevention can be discussed not only from a personal standpoint but from that of their dependents. When a saving of real dollars and cents can be demonstrated, interest jumps. Approaching patients through their dependents is one way of generating real interest, and a flow of interested comment and keen questions can result. These questions are difficult to answer at times because they tend to involve particular procedures by particular dentists. However, they must be answered as we represent not only the RCDC but the dental profession. Talks such as these can lead to wider horizons with listeners occasionally extending invitations to address outside clubs, home and school groups and so on.

Any talk should be as interesting and as well presented as possible, making use of movies, colour slides, models, training aids and pamphlets to the maximum degree available. It is unfortunate that we do not have a library of such items obtainable at short notice, perhaps from Dental Unit level at the very least. Without such aids a discourse on dental health can be dull. Opportunities to speak to groups come on short notice and at odd times which vary from unit to unit and section to section even within one Base. Unless we have our material at hand the opportunity is missed.

The lectures and demonstrations require a more intimate area for presentation than a theatre, drill hall or hangar, and they require more than one person to make the presentation. Not only do our therapists make better contact with part of the audience, but they also provide a different focus for the group and overcome any tendency to boredom.

Most people are familiar with 35mm colour slides but their reaction to such slides on dental subjects is almost one of wonder. I have been fortunate in acquiring over the years slides of toothbrushes and enlargements of their bristles, normal and diseased gingival tissues, clean and dirty mouths, rampant caries, as well as roentgenograms to illustrate various points. Any success I may have had with preventive lectures is largely due to these slides. Photographs of a wall plaque showing the RCDC Crest and a photograph of the RCDC School at Borden open the series. Such a series, possibly prepared by The School, would be a valuable aid to lecturers, especially if their emphasis were Canadian and in some way could feature Canadian Service situations and personnel.

Finally, the Corps could consider the educational possibilities offered by our many waiting rooms. Rather than a few tattered juvenile posters secured to the wall by cellulose tape, would not framed attractive productions directed to the military and adult patient be preferable? A circulating library of these items would carry our message to the patient in a painless way and their rotation would prevent over-familiarity. Each waiting room in the Corps could then become a small but important centre of preventive knowledge.

LCOL JM Smith, CD, DDS,
London, Ontario.

The RCDC News

SIXTH ANNUAL RCDC BONSPIEL

The Sixth Annual RCDC Bonspiel was again hosted by the RCDC School. 32 rinks representing every RCDC unit in Canada participated in the Bonspiel.

List of winners and runners-up:

<u>Winner "A" Event</u>	<u>Winner "B" Event</u>	<u>Winner "C" Event</u>
Skip - MWO JA Fraser	Skip - CPL JE Clint	Skip - LT TM Jackson
Vice - WO RJ Goodwin	Vice - MWO EE Mazerall	Vice - COL CM Cornish
2nd - MAJ GIJ Bisailon	2nd - MWO JH Sadler	2nd - LT McEwen
Lead - LCOL GE Windsor	Lead - SGT B Vandervaart	Lead - SGT JG Moore
<u>Runner-up "A" Event</u>	<u>Runner-up "B" Event</u>	<u>Runner-up "C" Event</u>
Skip - SGT RJJ Tremblay	Skip - CAPT CW Kearns	Skip - LCOL PS Sills
Vice - MWO (AF)(W) PE Savage	Vice - LCOL WH Carter	Vice - CAPT DD Robertson
2nd - MAJ JF Begin	2nd - CAPT AM Gareau	2nd - CWO TL Batten
Lead - CAPT JM Steadman	Lead - WO PD Peterson	Lead - CPL LR Hatcher

It is regretted that group photographs of winning rinks were not suitable for publication.

On Saturday evening, 17 February, 147 Dental Corps personnel attended the Bonspiel dinner following which trophies and prizes were presented.

Division News

Visits

The Director General of Dental Services made liaison visits to TCHQ and 14 Dent Unit 10-11 Apr, and to 15 and 12 Dent Units 22-26 Apr 68.

Col IG Craigie, LCOL WR Thompson and Maj CA Casterton visited 15 Unit, 12 Unit and the Units in Europe during this quarter to brief all personnel in career aspects involving promotion and trade advancement.

BGEN BP Kearney, Col IG Craigie and Col JW Turner represented the Corps at the closing of the Medical-Dental Officers' Mess at CFB Borden 18 Apr 1968.

Maj JVP Chatwin visited the Units in Europe 27 Jan-3 Feb to discuss the Corps Preventive Dentistry Program which commenced 1 Apr 68.

Sports

While success eluded both rinks from the Division at the RCDC Bonspiel, one consisting of WO Sullivan (skip), Sgt Shergold, Sgt Dumas and WO James fared very well in the CFHQ Recreational League. They were runners-up in both the "B" Division of the CFHQ Recreational League and the CFHQ Final Bonspiel.

1 Dent Unit

Meetings and Conferences

On 26 Feb 68, dental officers in the Ottawa area attended a lecture in the NDMC auditorium presented by Dr DL Anderson on the subject - "Oral Cytology".

On 31 Jan 68 Maj JYJ Turcotte spoke to the Rideau District Dental Society in Perth. The subject of his presentation was "Cardiology and the Dentist".



SIXTH ANNUAL RCDC BONSPIEL - 1968

11 Dent Unit

Unit Bonspiel

The Second Annual 11 Dent Unit Bonspiel was held at the Griesbach Curling Club 24 Feb 68. A total of 45 curlers were in attendance from Cold Lake, Calgary, Penhold and Edmonton.



Winners of "A" Event
L to R - Sgt Walker
(Skip), Cpl Ayerst,
Cpl Peck and Cpl Schultz



Winners of "B" Event
L to R - LCOL Jackson,
Maj Brogan, WO Shand
and WO Neill (skip)

12 Dent Unit

Versatile Assistant

The RHC pipe band from CFB Gagetown was invited to perform in a Tattoo to be held in Jamaica 9-20 Mar 68. Due to an extreme shortage of pipers Cpl Roy was loaned to the band for this period. Although it was a good trip and he returned with a good tan, Cpl Roy is completely convinced that his transfer to the RCDC was a very wise move.

Sports

Maj TD Cobb and Capt WJ Percival (skip and mate) won the "C" Event in a "Night-hawk Bonspiel", held from 2100 hrs 2 Feb - 0900 hrs 3 Feb at CFB Gagetown.

Capt ED Cragg was selected for the Maritime Command Badminton Team and attended the finals in Edmonton 23-25 Jan 68.

13 Dent Unit

Retirements

Sgt "Joe" Gravelle has again retired from service with the RCDC. Shortly after retiring from the CA(R) in 1961 he joined the Reserves and was called out on continuous duty with the RCDC. He was employed at Downsview as a dental technician until 31 Mar 68 when his call-out ceased. Dental personnel at Downsview presented Joe with a gift and wished him well on his return to civilian life.

Major DJ Carmichael is leaving the Corps after 17 years of service which took him to Europe, the Middle East, as well as postings from coast to coast across Canada. Dave served with the RCAF as a pilot during World War II, but is best remembered for his big Stetson which was always in evidence at Corps sports functions. The family will move to Winnipeg where he has taken a position with the Dental Faculty at the University of Manitoba. The Corps wishes Dave the best of luck in his new career.

14 Dent Unit

Meetings and Conferences

LCOL Anglin, Maj Begin, Capts Steadman and Poy attended the Manitoba Dental Association Convention 19-20 Jan 68. Dr FM Lott, ex DGDS of the Canadian Dental Corps 1939-45, of Los Angeles, California was a guest clinician. His subject was "Flange Techniques in Complete Dentures". Dr WP Muncie, President of the Canadian Dental Association was guest speaker at the Saturday luncheon. His subject was "Denticare under Professional Control".

Col SN Bhaskar, Chief, Department of Dental and Oral Pathology, Walter Reed Army Medical Centre Washington, DC, spoke to the Winnipeg Dental Society 19 Feb 68 on "Oral Diagnosis".

Special Events

Dental personnel in the Winnipeg area spent an afternoon and evening of curling 16 Mar 68 at the CFB Winnipeg Curling Club. The presentation of prizes followed the curling and Capt and Mrs Fortier were honoured at the social gathering prior to their departure on posting to Germany.

15 Dent Unit

Courses

Capt JS Dion safely completed the Basic Para Course at Rivers, Manitoba, in Jan 68 and proudly wears his wings with the R22eR in Quebec City.

Sharp-Shooting Dental Officer

LCOL JC Brick was selected as a member of the Dominion of Canada Rifle Association Team which represented Canada in the Commonwealth Rifle Match held in Melbourne, Australia, on 12 Mar 68. Preliminary matches were held in Wellington, N.Z. and in Sydney, New South Wales. It is hoped that a more detailed account of this interesting safari may be available for publication in a subsequent issue of the Quarterly.

Retirement

Canadian Forces Headquarters has announced the retirement of LCOL WH Carter after 24 years of service. Bill served with the RCAF as a pilot during World War II and following the War obtained his DDS from McGill University. He will long be remembered for his prowess in RCDC golf and curling events. The Corps wishes Bill and his family good fortune on civvy street.

The RCDC School

Training

Dent 33 - Dental Assistant 721 PL 3 - 26 Feb-19 Apr 68



Seated L to R - CWO TL Batten; Maj SW Muller; Col GR Covey; Sgt GN Fathers
Middle row L to R - Pte (AF)(W) IJ Moore; Cpl (AF)(W) BA Gilkes; Pte (AF)(W) BM McCaffery BM; Cpl (AF)(W) MM Daniels; Ptes (AF)(W) ML Marcoux, JE Brayton, PA Graham, JG Parker
Back row L to R - Ptes CH Forsythe, JG Allain; (AF)(W) MB Bond, (N)(W) TD Manuge, (AF)(W) MF Roseberry, CA Bondy; Cpls LA Overbye, A Busse

Dent 31 - Dental Laboratory Technician 723 PL 5 - 27 Mar-24 May 68



Seated L to R - WO J Hossdorf; LCOL PS Sills; Col GR Covey; LCOL AG Andrews; Capt DD Robertson; Sgt KS Rothwell
Middle row L to R - Cpls JR Ritchie, GN Challenger, BF Hannah, JD Cormie, PD Whynott
Back row L to R - Cpl CSB Heather, Cpl CS Brown, Cpl WJ Mitrikas, Cpl JM White, Cpl RS Black

Academy of Dentistry Toronto - Visits The RCDC School

On 21 Mar 68, the RCDC School hosted 40 members of the Academy of Dentistry, Toronto. The Commandant welcomed the distinguished group to the School, outlined the basic organization and function of the RCDC in the Canadian Forces and made specific reference to the missions of the RCDC(S) to the Corps. Major SW Muller presented a resume of the Preventive Dentistry Programme to be initiated in the RCDC and the role of dental auxiliaries in Service dentistry. The guests were then conducted on a tour of the School. The tour stressed several displays and practical demonstrations of the capabilities and functions of dental auxiliaries.

After lunch, a series of lectures were presented by LCOL AG Andrews, MAJ JN Wright, MAJ AG Taylor, and LCOL PS Sills.

The day's activities were climaxed by a fellowship hour and dinner with 55 people in attendance. During dinner, Dr GR Marshall expressed the Academy members' appreciation for the programme and made a presentation to the RCDC School.



L to R - Maj AG Taylor, LCOL PS Sills, Dr Geoff Smith, Maj JN Wright, Dr Gordon M Marshall, Col GR Covey, LCOL AG Andrews, Dr JT Hing, Maj SW Muller, Dr MA Kamienski

Training Assistance

On 19 Jan, Dr. James Purves, President, Board of Directors of Royal College of Surgeons of Ontario was a guest lecturer for the Officers Clinical Course.

On 5 Feb, Dr HA Hunter, Professor of Oral Pathology at the Faculty of Dentistry U of T, spoke to the Officers Clinical Course and staff on "Oral Cytology"; and on 9 Feb, Dr JS Speck, Associate Professor of Periodontics at the Faculty of Dentistry U of T presented a lecture and practical demonstration on "Occlusion".

Conferences and Meetings

In the series of staff professional meetings held at the School, the following papers have been presented:

- | | |
|---|-----------------------|
| The Mechanism of Blood Clotting | - Capt N Misura |
| Occlusion | - Capt G Pinsonneault |
| Therapeutic Application of Bite Planes | - Maj JH Marion |
| Case Presentation of Calcified Submaxillary Gland | - Capt HJ Nadeau |

Sports

On 24 Feb, the CFMS held their first Canada-wide Bonspiel at Borden. In order to complete 32 rinks, the RCDC School "obliged" with a team consisting of Cpl Clint (skip), MWO Mazerall, CWO Batten and Sgt Vandervaart. They won "B" Event and the Col Norm McNally Trophy will reside in the RCDC(S) trophy case for the year.

1 Dent Eqt Dep

Training

Special Conversion Course Dental Storeman Group 3 - 8 Jan-28 Mar 68



Back row L to R
MWO JW Hutchinson
CWO EC Carpenter

Front row L to R
(course members)
WO AL Strub
WO EA Jermain
WO AH Green
SGT CE Schmelzle

Sports

The Annual 1 DED - 1 CMED Curling Challenge was held on 19 Mar 68. No 1 CMED managed to win over the Depot by two points.

35 Fd Dent Unit

Sports

The RCDC (Europe) Bonspiel was held in Zweibrücken 16 Feb 68 when curlers of 4 Field Dental Coy led by LCOL Richardson visited the Air Division for a match against personnel of 35 Field Dental Unit. The match was held in the Curling Club at 3 Wing and 4 Field emerged victorious. Thus, the Horse's Head Trophy now decorates LCOL Richardson's office and the trophy which represents the north end of a horse going south is carefully hidden in LCOL Protheroe's office.



LCOL Protheroe
presenting the
RCDC (Europe)
Curling Trophy
to LCOL Richardson
and the curlers
of No 4 Fd Dent
Coy.

Conferences and Meetings

LCOL DH Protheroe visited 2nd US General Hospital at Landstuhl on 7 Mar to present a paper entitled "The use of Auxiliary Dental Personnel in the RCDC".

New Clinics

A new RCDC clinic staffed by Capt RM MacDonald and Sgt JF Giroux was opened in Chievre, Belgium on 15 Feb 68 to provide dental treatment for Canadian servicemen and their dependents stationed at SHAPE HQ.

Another new dental clinic should open by early May at HQ Allied Air Forces Central Europe in Brunssum, Holland staffed by Capt CJ Boston and Sgt JR Fathers.

4 Fd Dent Coy

Conferences and Meetings

Professional study group meetings were held on 24 Jan 68 and 28 Feb 68 with the following presentations:

- a. Maj Kessel RADC - "Cysts and Bone Defects" - a summary of interesting case histories, many of which were referrals from 4 Fd Dent Coy.
- b. Capt Griesbach - "With Gun and Camera through the Oral Cavity" - a review of apthous and herpetic lesions.
- c. Maj Deyette - "Dowel Crowns - Using Direct Patterns" - a table clinic.
- d. LCOL Richardson - "Treatment Planning - an Aid in Assessing Difficult Problems" - a demonstration of a technique of mounting study casts on an adjustable articulator for occlusal analysis.

Judo Champion



Congratulations to Capt Swanzey who won the British Army Light-Heavyweight Judo Championship in Colchester, England, on 29 and 30 Mar 68.

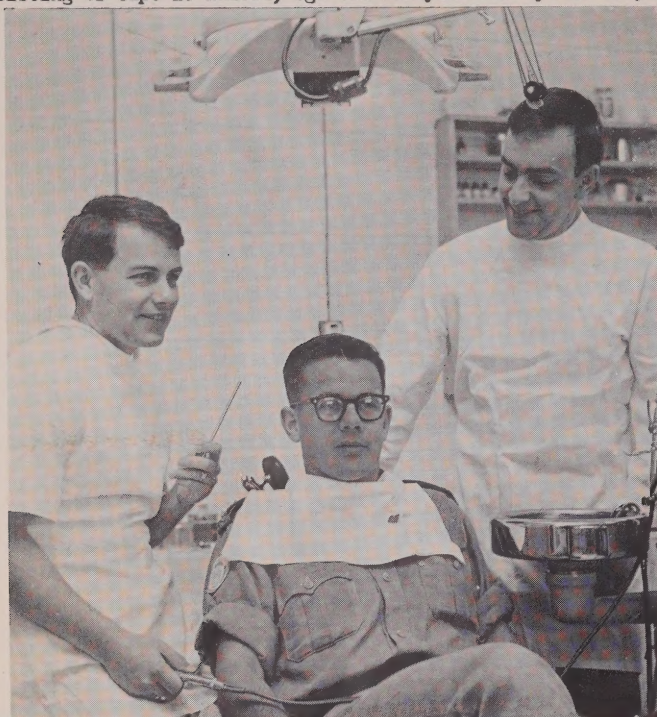
A personal message from General Sir John Hackett to LCOL Richardson read - "Please convey my warm congratulations to Captain AN Swanzey on winning the Light-Heavyweight Event of the Army Judo Individual Championships at Aldershot on 29/30 Mar 68."

Capt Swanzey with his trophy

Rotation

Dent Det Cyprus

During the month of March, the Cyprus Detachment was rotated, the new one consisting of Capt HJ Nadeau, Sgt CBS Forsythe and Cpl RW Danyluck.



Capt JG Thompson (left), the patient - Capt J Fuller looking well taken care of, and Capt HJ Nadeau in his new environment.

Skiing in Cyprus

Believe it or not, members of the RCDC Detachment in Cyprus enjoyed some local skiing during the month of February. Cpl Beauchamp spent a week of UN leave in the ski area - Mt Troodos. Unfortunately after a one and one-half hour skiing venture in the same area, Capt Thompson ended up nursing a sprained right ankle.

Professional Training

WNT Air Force Base - Colorado Springs, Colorado, USA

Major	BA	Gaudet	- Oral Surgery	- 1-12 Apr 68
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US Naval Dental School - Bethesda, Maryland, USA

Major	JF	Begin	- Periodontics	- 22 Apr-7 Jun 68
Capt	DG	Jones	- Periodontics	- 22-26 Apr 68
Capt	JAA	Boucher	- Short Specialty Course in Dentistry	- 29 Apr-3 May 68

University of Michigan, Ann Arbor, Michigan, USA

Capt	FC	Arpin	- Crown & Bridge Prosthesis	- 4-15 Mar 68
Capt	EF	Foley	- Complete Denture Prosthesis	- 15-26 Apr 68
Capt	JWC	Walls	- Periodontics	- 1-12 Apr 68

Doctor's Hospital, Toronto, Ont

Major	JF	Eadon	- Residency Training in Oral Surgery	- 18 Mar-10 May 68
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Training

RCDC School - Canadian Forces Base Borden

Dental Assistant 721 Level 3 Course - 26 Feb-19 Apr 68

Cpls A Busse, LA Overbye; Ptes JG Allain, CH Forsythe, Cpls (AF)(W) MM Daniels, BA Gilkes, Ptes (AF)(W) MB Bond, CA Bondy, JE Brayton, PA Graham, ML Marcoux, BM McCaffery, IJ Moore, JG Parker, MF Roseberry, Pte (N)(W) TD Manuge

Dental Therapist 725 Level 8 - 5 Feb-31 May 68

MWOs AS Field, SL MacLean; WO WA Jackson

Dental Laboratory Technician 723 Level 5 - 27 Mar-24 May 68

Cpls RS Black, LS Brown, GN Challenger, JD Cormie, BF Hannah, CSB Heather, JR Ritchie, WJ Mitrikas, JM White, PD Whyntott

Ticonium Company, Albany, NY, USA

Ticonium Equipment Course - 11-15 Mar 68

Cpls PE Harkin, EJ Schultz, JIA Violette

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Cpl LJ Kallan, Cpl (AF)(W) ME Mahlitz; Pte (AF)(W) MM Levert, Pte CH Forsythe

Promotions

To Major - GW Hill, PR McQueen
To CWO - LA Lawson
To WO - FJ Reid
To Sgt - WB Looker, LI MacLean, RC Wormington
To Cpl - JMM Arbour, GH Gallagher

Retirements and Releases

LCOL WH Carter; Maj DR O'Hara; Capts JLC Giguere, JEG Brissette, IM Hamilton, Dr HE Bing; Sgts JA Gravelle, CA Chartier; Pte BLJ Chenail, Pte (N)(W) SM Janz

Vital Statistics

Marriage

Miss SJ Cormier (Dent Nurse) to Mr DC Morrison

Births

Son - Sgt & Mrs H Marckwort

Daughter - Maj & Mrs BA Gaudet (correction from TC Gaudet in last issue with apologies); Capt & Mrs JPJ Laporte, Capt & Mrs WA Gray, Capt & Mrs EF Foley; Sgt & Mrs LI MacLean; Pte & Mrs EAJ Morin

NOTICE

During the recent RCDC Bonspiel in Camp Borden a Zippo Lighter was found in the washroom of the Hennesy Block. The inscription on the lighter reads "Presented by 3 Clinic CFB Petawawa". The owner may claim same by writing Sgt Tremblay at No 2 Dental Clinic, CFB Winnipeg, Westwin, Man.

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TORONTO 2

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Quarterly

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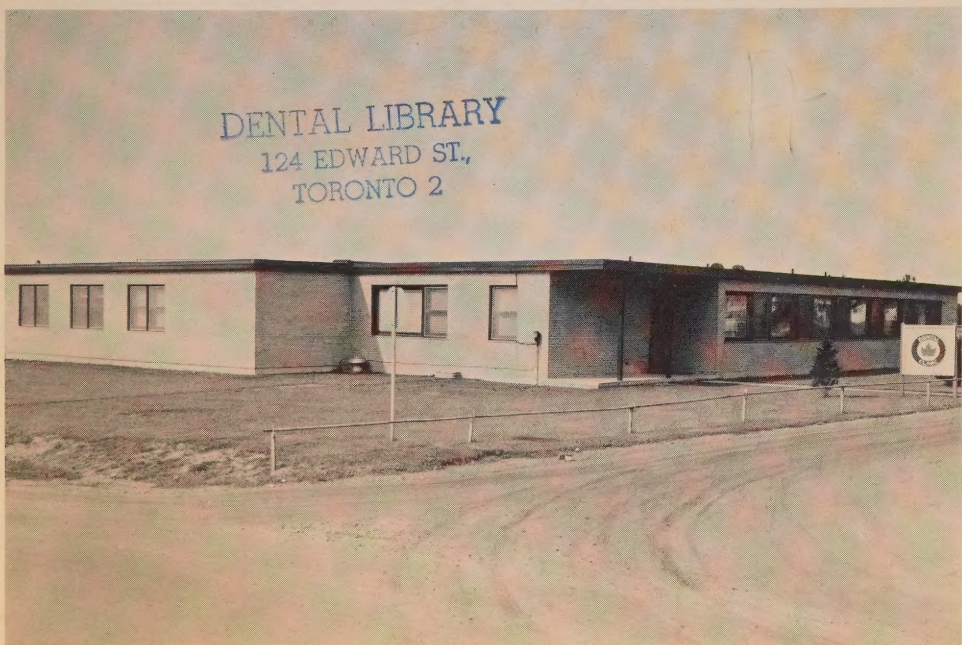


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The RCDC Quarterly

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Editorial Board: COL JW Turner
LCOL G MacDougall
MAJ JVP Chatwin

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for the Canadian Forces,
Canadian Forces Headquarters,
Ottawa 4, Ontario.

Cover Photograph

No 13 Dental Clinic CFB Trenton
new wing on left

PERIO-ENDO CONSIDERATIONS: COMBINED THERAPY

Major J.F. Begin, BA, DDS



The recognition in recent years of the intimate relation between the dental pulp and the supporting structures of the tooth has led to the development of a technique of combined perio-endo therapy. Both Periodontics and Endodontics are directly involved with the attachment apparatus of a tooth at the gingival and lateral wall areas and at the periapex.

Accessory canals of the pulp leading to a furcation area, and supernumerary canals at the apex and lateral canals leading to the periodontal ligaments, are not unusual. Cases present themselves where a periodontal pocket leads to the apex of a tooth causing a retrograde pulpitis, or where a pulpal abscess destroys the periodontium coronally.

Messinger and Orban¹ have reported successful pocket elimination by root amputation and endodontic therapy. Maxmen² reports healing of a periodontal pocket with bone regeneration following routine endodontic therapy alone. Hiatt^{3,4,5} and Bjorn⁶ have reported cases where periodontal pockets developed from pulp disease and the pocket elimination and regeneration occurred following combined perio-endo therapy.

Treatment Plan

In establishing a treatment plan, consideration of the above facts is important when x-rays reveal only one root of a multirooted tooth hopelessly involved periodontally. The remaining one or two roots may be salvaged by hemisection or root amputation and used functionally, and in some instances even as an abutment for a fixed or removable prosthetic appliance.

Grossman⁷ claims that in the case of pathology of the attachment apparatus in multirooted teeth the problem of diagnosis is increased. If pulp pathosis is causing the bone loss, endodontic therapy should bring about a regeneration of the supporting structures. However root canal treatment alone would not be sufficient if the bone loss is of periodontal origin. Endodontal treatment is nevertheless often required to facilitate periodontal repair in certain cases of periodontal involvement.

Indications for Combined Therapy

Some of the indications for combined therapy are as follows:

- a. a multirooted tooth hopelessly involved periodontally, but where one or two of the roots could be used as an abutment for a prosthetic appliance;
- b. a recurrent or chronic periodontal abscess leading to the apex of a non-vital tooth;
- c. a recurrent or chronic abscess which has caused destruction of surrounding bone and has led to gingival drainage;
- d. an area (furcation) which is impossible for the patient to keep clean and which is susceptible to root caries;

- e. cases in which infrabony pocket treatment has not been successful;
- f. cases in which accessory or lateral canals lead to a furcation or proximal wall where the degenerated tissue of the pulp becomes an irritant to the periodontal structures;
- g. an inaccessible root canal in a multirooted tooth.

The purpose of the treatment is to eliminate inflammation by removing the irritant and creating a healthy, useful and easily cleansed area.

The treatment plan depends on proper diagnosis.

If the
pulp is:

- a. vital - Perform periodontal therapy first and if there is no healing, consider endodontic treatment.
- b. non-vital - Perform endodontic therapy first and if there is no healing, consider periodontal treatment.

If the
tooth is:

- a. single rooted - Perform endodontic therapy followed by periodontal surgery.
- b. multirooted - Perform endodontic therapy followed by periodontal surgery and either hemisection or root amputation.

Clinical signs which should make the dentist aware of a condition which probably require combined therapy include the following:

- a. pockets near or leading to the apex and/or a furcation,
- b. fistulae,
- c. discolored teeth,
- d. slow healing or periodontal lesions,
- e. hypersensitivity,
- f. chronic sulcus drainage,
- g. history of pulp insult from occlusal trauma or restorative dentistry,
- h. suspicion of accessory canals communicating with a periodontal lesion.

Before attempting treatment, the operator must consider the prognosis. He might ask himself the following questions:

- a. Are we merely attempting heroics, an academic exercise or beneficial therapy?
 - b. What is the general condition of the mouth? Why not simply extract the tooth?
 - c. Will there be adequate bone support and pocket elimination?
 - d. Will the procedure enhance cleanliness?
 - e. What degree of mobility exists?
 - f. Is the tooth amenable to endodontic therapy? Are the roots and canals too curved?
 - g. Is the pulp tissue calcified?
 - h. Are the roots widely spread or fused?
 - j. Is the tooth strategically located?
- (1) Is it vital to some existing prosthesis such as a bridge?
 - (2) Will it preserve arch integrity and help avoid tooth replacement?
 - (3) Will it ensure a better prosthesis by providing a distal abutment for a partial denture or a bridge?

Having decided that an attempt to save the tooth is warranted the first consideration should be given to its stabilization. Though a permanent type stability could be achieved at this time with a cast splint, bridge, or with an amalgam splint

in posterior teeth, it should be sufficient to construct a temporary splint with ligature wire and a covering of a self-curing acrylic.

Endodontic therapy is the next step in the treatment and the dentist should be guided by the following generally accepted basic principles:

a. complete debridement of root canal

All necrotic material and organic debris must be gently but thoroughly removed from the canal.

b. complete disinfection

Endodontists now rely mostly for disinfection on thorough debridement and enlargement of the canal using sodium hypochlorite as an irrigating solution. In medicating the canal, the least irritating drug is usually the drug of choice. Methyl cresyl acetate (cresatin) is commonly used. If a more potent germicide is desired, CMCP is used.

c. obturation of the canal

The entire root canal should be filled laterally and apically as well as possible, taking into consideration the possibilities of lateral canals and accessory foramina. The roots to be retained are filled first, using silver or gutta-percha points, and the root to be amputated or sectioned may be filled with amalgam to a depth of about 4 mm. It is also possible to insert an amalgam at the stump site after healing is complete in cases where a silver point was used but a perfect seal was not obtained at the site of amputation.

An endodontic case is considered a success if: the tooth remains functional; there is no pain or fistula; root resorption does not progress and any radiolucent area at the apex does not enlarge. In the event that healing does not occur, apical surgery may be indicated; and if a faulty apical seal is noted, an apical amalgam may be placed.

Periodontal Surgery is performed on the following appointment. Since bacterial plaque has now been incriminated as the prime initiating factor in periodontal disease the patient should have been previously educated in oral hygiene and home oral physiotherapy. Only in the case of a well-motivated patient will surgery have any real beneficial value.

In the case in which endodontic therapy alone will suffice to clear up the periodontal involvement, no further treatment is required. However, in cases of deep pockets and infrabony involvements in a single rooted tooth, periodontal surgery in conjunction with the elimination of occlusal trauma is now indicated. A flap operation is required to facilitate removal of the old gingival attachment apparatus and gain access to the deeper structures. A complete root scaling to remove calculus and root planing to remove necrotic cementum is performed. The infrabony pocket is cleansed of all granulomatous tissue and any required osteoplasty is performed at this time in order to ensure a good physiologic architecture on which the gingiva is dependant for its own contour and healthy form. The flap is repositioned, sutured, and covered with an oral bandage and periodontal dressing. One week later the sutures are removed and the dressing replaced until healing is sufficiently advanced to permit effective oral physiotherapy by the patient, usually between 14-18 days after the operation. The purpose of the dressing is to confine the healing tissues and prevent food impaction into the wound.

Multirooted Teeth - One Root Involved

When dealing with a multirooted tooth in which only one root is periodontically

involved, an evaluation must be made whether to proceed with a root amputation^{8,9} or a hemisection.

Factors to be considered include:

- a. the amount of sound healthy bone surrounding the remaining root;
- b. the degree of mobility;
- c. the cantilever effect;
- d. the degree of ability to keep the area clean, and
- e. whether dealing with an upper or lower molar.

The operator will probably favour a hemisection in the case of a lower molar and a root amputation in the case of an upper molar based on the above factors.

Once again, the endodontic therapy is performed first. A final diagnosis and treatment plan is made by probing the sulcus and the furcation, studying the x-rays, and determining the location for the root cut. The occlusion is checked and all prematurities and balancing contacts are eliminated. The tooth is reduced bucco-lingually. Surgical access is gained by elevating a flap and the cut is made at the expense of the root, just below the tooth contact point with the adjoining tooth. Complete and meticulous debridement of the pocket is accomplished, root planing completed, and the root stump is smoothed using a fissure bur and a scaler. The surgery is then completed as already described. A final polishing of the stump area using sand paper strips and a polishing cup with pumice and fluoride is delayed until soft tissue healing is complete.

The present state of knowledge makes the use of antibiotics a matter of personal choice. It should be kept in mind, however, that it takes approximately 17 days to obtain a new attachment apparatus of the connective tissue, that is, for the collagen fibers to become imbedded into the newly deposited cementum. The disintegration of the collagen fibers by bacterial toxins hinders this reattachment.

Some of the salient points to be remembered include the following:

- a. all granulomatous tissue must be removed from the pocket;
- b. the roots must be thoroughly scaled and planed;
- c. the bone ridge should have a good physiologic contour;
- d. the tooth stump must be sealed and highly polished;
- e. buccal-lingual occlusal reduction is necessary to improve the crown-root ratio;
- f. the occlusion must be checked since there should be normal stops in centric occlusion but no prematurities or balancing contacts.

In conclusion, it should always be borne in mind that "tooth function, individually or as a bridge abutment, is not as dependant on root size, quantity of attachment to bone, or the occlusal factor, as it is on pocket elimination, the establishment of adequate gingival contour and the attention to meticulous oral physiotherapy."

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Editor's Note

Major JF Begin recently attended a post-graduate course in Periodontics at the National Naval Medical Center in Bethesda.



Members of the Periodontics Department of the U.S. Naval Dental School at the National Naval Medical Center in Bethesda, Maryland, assemble to congratulate Major Begin on completion of a seven-week course in Periodontics.

Major Begin (center) is presented with a certificate by Captain KL Urban, DC, USN, (left, center), Commanding Officer of the U.S. Naval Dental School. Looking on are (left to right) Captain NW Rupp, Head, Officer Academic Department; Captain WC Wohlfarth, Jr., Executive Officer; Commanders WC Moffitt, JJ Lawrence, Jr., JF Hardin; and Captain PF Fedi, Head, Periodontics Department.....
OFFICIAL U.S. NAVY PHOTOGRAPH.

THE SLIDING FLAP OPERATION - CASE REPORT

LCOL RA Fell, CD, DDS



A lateral sliding flap plastic procedure should be considered when the gingiva recedes creating a dehiscence exposing a root containing no filling material. Grupe and Warren¹ have devised a very effective plastic operation for covering the denuded root with gingiva removed from an adjacent tooth. Discussing esthetics in periodontal therapy Chaikin² points out that within an accepted criterion of a normalcy of 1, 2 or possibly 3 mm depth, a new sulcus made up of new tissue attached to the site will be formed. This procedure is the subject of the following case report.

Case Report

History: A 30-year old senior NCO presented with a 5 mm gingival cleft at the labial of the lower left central, photo 1, in Jan 1968. All other gingival tissues were in good health. There were no pockets. With the exception of a bridge to replace the lower left first molar all restorative work had been completed. The lower left third molar was impacted and the upper right unerupted. A high frenum attachment was noted but the probable etiology of the cleft was occlusal trauma.

Procedure: A sliding flap procedure was attempted to remedy the gingival defect. The tissue immediately adjacent to the cleft was excised, photo 2. There was little calculus and the exposed tooth surfaces were thoroughly planed. A vertical incision was made at the mesial of the lower left cuspid and carried well into the muco-labial fold, photos 3 and 4. A flap was raised of the tissue over the lower left lateral and repositioned with sutures to cover the gingival cleft defect area of the lower left central, photo 5.

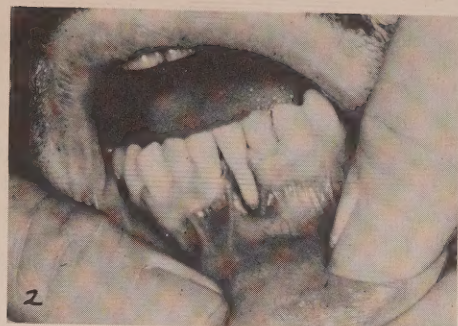
A periodontal pack was placed and reinforced with stainless steel wire, photo 6. The pack was left in place for seventeen days, being replaced once after ten days when good granulation was noted in the denuded area from which the flap was raised. Photos 7 and 8 show the condition when the pack was finally removed.

Discussion: The following post-operative observations are made of a gingival cleft repair procedure done by a simple office procedure. Less than three weeks were required for a good preliminary result. The gingival contour is good although there is a slight reduction in height of the gingival labial crest at the lower left lateral. Slight scarring is noted at the suture lines of the flap. Regeneration of new tissue in the denuded area is excellent. We hesitate to claim that re-attachment has been achieved in the central area, however, no pocket can be probed at the six month follow-up review.

Summary

A gingival cleft probably caused by occlusal trauma and the procedure used in its repair by a sliding flap procedure is reported.

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TONGUE POSITION AND ITS IMPORTANCE TO THE RETENTION OF THE MANDIBULAR DENTURE

Captain E. F. Foley, DDS



Introduction

The position of the tongue plays an important role in the success or failure of the mandibular denture since it is one of the essential factors effecting retention and stability. The operator must be able to recognize the tongue position needed to maintain a seal during the major functions of the mouth. Approximately 70-75% of all patients have a normal tongue position and the remaining 25-30% have an abnormal or retracted tongue position. The latter develops early in life and apparently is the result of habit. When the natural teeth are present there is little effect on function. However, when teeth are lost it can be a serious problem to the stability of mandibular dentures.

Retention may be defined as the resistance of a denture to removal in a direction opposite to that of its insertion. This depends on interfacial surface tension and the intermittent functioning of a partial vacuum. In order to create this partial vacuum a border seal is necessary both in maxillary and mandibular dentures. However, it is usually more difficult to achieve a border seal in the mandibular denture since the seal area is harder to locate and has considerable movement during function.

The seal area of the mandibular denture is the floor of the mouth and the lateral throat form. The normal position of the floor of the mouth and the lateral throat form depend on the position of the tongue and move with it. If the tongue is in a normal position when the impression is taken, the floor of the mouth and the lateral throat form will be in a normal position also, and a border seal may be established that will be effective during the performance of the chief functions of the mouth.

Normal and Retracted Tongue Positions

The tongue takes part in the functions of sucking, swallowing, receiving food into the mouth, mastication and vocalization. These functions are most effectively initiated and carried out from a position of rest or what may be referred to as a normal tongue position. When food is placed in the mouth the tongue must assume the normal position to receive it. During the function of chewing it works in harmony with the teeth and the buccinator muscles. The act of placing food on the occlusal surfaces of the posterior teeth by the tongue begins from the normal position. It is obvious that, as with any group of muscles, the tongue has an optimum position from which it can easily start and effectively perform its functions. This is the normal tongue position.

Normal tongue position has the following characteristics:

1. it completely fills the floor of the mouth;
2. the lateral borders rest on the ridges which would normally represent the occlusal surfaces of the teeth; and
3. the tip or apex of the tongue rests on, or is just to the lingual of, the lower anterior ridge.

Patients with normal tongue position which is essential in effecting border

seal, are fortunate in possessing conditions conducive to the retention of mandibular dentures.

Retracted tongue position has these characteristics:

1. the tongue is pulled back and the floor of the mouth is exposed;
2. the lateral borders of the tongue are either inside or posterior to the ridges;
3. the apex of the tongue sometimes lies in the posterior part of the floor of the mouth or may be withdrawn into the body of the tongue.

Patient Education

Patients with a retracted tongue position have a difficult time wearing mandibular dentures since the floor of the mouth moves downward and backward as the tongue is pulled back, causing the seal of the denture to be lost. It is the responsibility of the dentist to point this out to the patient and to demonstrate to him the normal tongue position and its significance. Most patients can learn to keep their tongue in a normal position by simply being shown how. However, there are a number of exercises that have been developed by speech therapists in order to strengthen the larger muscles of the tongue and thereby hold it in a proper position. These are as follows:

Exercise 1

Swing the tongue sideways with great rapidity. The tongue should be out beyond the lower lip about 1/2 inch. This causes an alternating action of the styloglossus muscles while the tongue is held by the transversus muscles.

Exercise 2

Thrusting the tongue out and in, in rapid succession. This causes an alternating action of the posterior and anterior fibres of the genioglossus muscles.

Exercise 3

Thrusting the tongue out to its most extended position and pulling back quickly. This exercise strengthens the genioglossus, the styloglossus and the hyoglossus muscles.

These exercises should be practised twice daily for 5-10 minutes with the dentures out. The response of the patient will depend on many factors and unfortunately some patients will never master the "knack" of wearing mandibular dentures. However it is usually obvious to them that their failure to overcome their denture problems is not the fault of the dentist, but rather due to their own inability to master a normal tongue position.

The Relation of the Tongue to the Floor of the Mouth and the Lateral Throat Form

The floor of the mouth functions at many levels. The two extremes may be referred to as the high and low level. Somewhere in between is the normal level. Locating this level is necessary in establishing a border seal that will be effective during function. As already mentioned, the position of the floor of the mouth depends on the position of the tongue. When the tongue is raised to the roof of the mouth the floor is at its high level and when it is below the occlusal plane of the mandibular teeth the floor of the mouth is at its low level. With the tongue in its normal location the floor of the mouth is at its normal level. Therefore, the only way to determine the desired or normal level of the floor of the mouth is to have the patient place his tongue in the normal position.

The lateral throat form is that part of the mouth which limits the downward and backward extension of the lingual flanges of the mandibular denture. It is formed by the styloglossus and the palatoglossus muscles as they pass from the lateral wall of the throat into the side of the tongue. The lateral throat form moves as the tongue moves and the only way to record it in its normal position is to have the tongue in its normal position. Hence, to establish a usable seal area for the mandibular denture the tongue must be in a normal position when the impression is taken.

Occlusal Plane and Arch Arrangement

Since the tongue functions by touch and pressure, in contrast to the skeletal muscles, an edentulous patient is unable to keep his tongue in a normal position without something to guide it. This may be accomplished by building a wax rim on the impression tray. However, the wax rim must have the proper occlusal plane and arch arrangement to guide the tongue into a correct position.

There is a close relationship between the mandibular teeth, the buccinator muscles and the tongue during the function of chewing. If the occlusal plane of the mandibular teeth is too high it forces the tongue into a position that reduces its efficiency. Furthermore, a high position of the tongue causes the floor of the mouth to assume a higher position resulting in extra pressure on the lingual flanges of the denture, a tendency to dislodge it and partial loss of the border seal. An occlusal plane that is slightly lower than normal causes no problem for the denture patient.

The requirements for establishing an occlusal plane are as follows:

1. the occlusal plane in the region of the mandibular first molars is approximately three millimeters below the top of the retromolar pads;
2. the remaining plane anteriorly is parallel to the crest of the residual ridge;
3. as an additional reference, the top of the wax rim in the region of the mandibular first bicuspid should never be above the corner of the mouth.

The term arch arrangement is used to indicate the buccal-lingual relation of the teeth to either the crest of the ridge or the stress bearing area. The natural tendency is to set the mandibular posterior teeth too far to the lingual so that the arch is narrowed. This has the effect of crowding the tongue and reducing its effectiveness in functioning with the buccinator muscles. The mandibular posterior teeth should be set over the centre of the stress bearing area. When looking down on the occlusal surfaces of the posterior teeth, an equal amount of denture base should be seen on both the buccal and lingual sides of the teeth.

The Denture Base Outline

In order to fabricate a custom acrylic tray one must be familiar with the limits of a properly formed denture base outline. The labial flange from one buccal frenum to the other buccal frenum is most accurately trimmed by eye. The muscles of the lower lip are not conducive to border molding method because the muscle fibers are parallel to the oral orifice. The buccal flange from the buccal frenum to the retromolar pad is extended to cover the external oblique line. The posterior border is extended to completely cover the retromolar pad.

The distolingual extension of the lingual flange, which is limited by the lateral throat form, is the beginning of the seal area. This area is dependent on the position of the tongue. However, studies show that when the tongue is in the normal position this border extends downward and backward from the retromolar pad at an angle of approximately 45 degrees.

The length of the lingual flange must be such that it maintains contact with

the floor of the mouth when the floor is at its normal level. Studies indicate that the normal position of the floor of the mouth (determined by having the tongue in its normal position) is about the level of the mylohyoid ridge. An extension of the lingual flange of approximately 2 millimetres below the level of the mylohyoid ridge provides an effective border seal without impinging on the functions of the tongue.

Technique

- a. The preliminary impression is taken and a study model poured.
- b. An acrylic tray is fabricated on the study model and the tray is trimmed to a proper denture base outline.
- c. A wax rim is constructed on the tray. This must have the proper occlusal plane and arch arrangement (Fig 1).

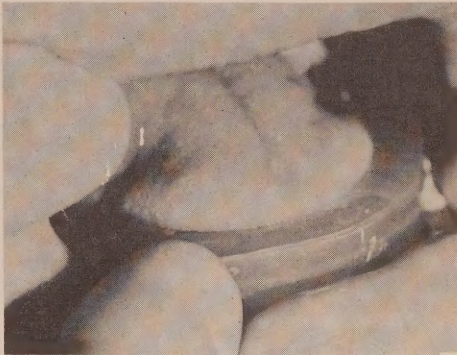
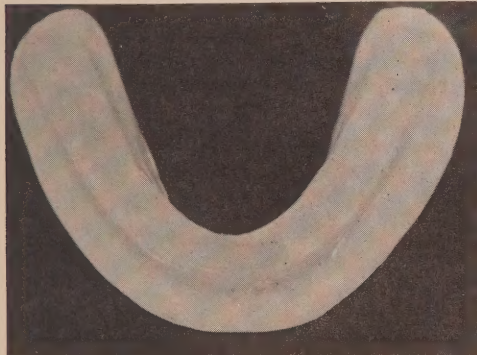
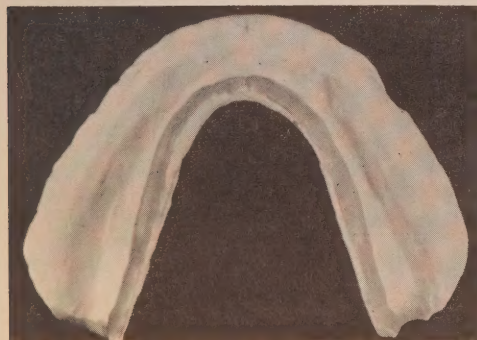


Fig 1 (upper left) - Wax rim on the custom acrylic tray

Fig 2 (above) - Tray with rim seated in mouth with tongue in normal position

Fig 3 (left) - Final impression showing post dam



- d. Impression paste is placed on the tray which is then inserted into the mouth and seated with moderate pressure. At the same time the patient is instructed to place the tip of his tongue on the anterior part of the wax rim thereby guiding it into a normal position (Fig 2).
- e. When the material has set the impression is removed and checked for pressure spots. The tray is relieved wherever it shows through.
- f. The impression is repeated by adding paste to the entire tray and maintaining proper tongue position.
- g. The impression is post-dammed with wax (Kerr's #4 Korecta wax) starting distal to the retromolar pad and running along the buccal aspect of the lingual flange to the opposite side and distal to the retromolar pad (Fig 3).

- h. The impression is tested for retention with the patient holding his tongue in the normal position.

Summary

Normal tongue position facilitates the retention of a mandibular denture. The normal tongue position places the floor of the mouth and the lateral throat form in the normal position. In order to have retention, a border seal area is necessary. The seal areas of a mandibular denture are the floor of the mouth and the lateral throat form.

Since the tongue functions primarily by touch and pressure, a wax rim simulating the occlusal plane and arch arrangement facilitates maintenance of a normal tongue position during impression making. All procedures leading to the completion of a lower impression should be done with the tongue in a normal position.

Acknowledgement

The author recently attended a course in Complete Denture Prosthesis at the University of Michigan from which much of the material in this article was derived.

SPACE SUPERVISION - MIXED DENTITION PERIOD

CAPT HA Pankratz, CD, BA, DMD



Space supervision is one of four rather specific areas of space management in the mixed dentition period. Each of the other three, namely space maintenance, space regaining and gross discrepancies are comparatively easy to define in terms of the conditions which obtain. Of the four, space supervision is the area which presents by far the greatest challenge to the clinician.

Definition and Diagnosis¹

Space supervision is a term applied when the following conditions present themselves in a mixed dentition:

- a. the mixed dentition analysis² produces doubt that there will be room for all of the permanent teeth;
- b. there may or may not be a space loss;
- c. there need not have been early loss of deciduous teeth;
- d. active treatment may be required;
- e. comprehensive applanancing may be required;
- f. the prognosis is neither good nor bad.

This list of conditions makes it obvious that space supervision cases will not likely emerge from the mixed dentition period in good order. The key to the diagnosis lies essentially in being able to exclude the simpler space maintenance, space regaining

or gross discrepancy conditions, and still recognize a Mixed Dentition Analysis which is at best questionable. Thus, space supervision depends upon the clinician's judgment and he must be convinced that the patient will have a better chance to develop a normal dentition with his help than without it.

Success with space supervision cases is dependent upon the clinician's knowledge of the details of the development of the mixed dentition and his timely application of that knowledge. An invaluable guide in this respect is contained in Nolla's³ studies of the Development of the Permanent Teeth (Fig 1 and Tables II & III). In addition to this comprehensive information, it is well to bear in mind that accelerated eruption of permanent teeth may be achieved if the primary predecessor is removed when the permanent successor reaches Nolla's Stage 8 of Calcification.

TABLE II.4A.—NOLLA'S 10 STAGES OF CALCIFICATION"

Compare the radiograph with the drawings and give the tooth a value accordingly. Should it lie between two stages, half-values may be used.

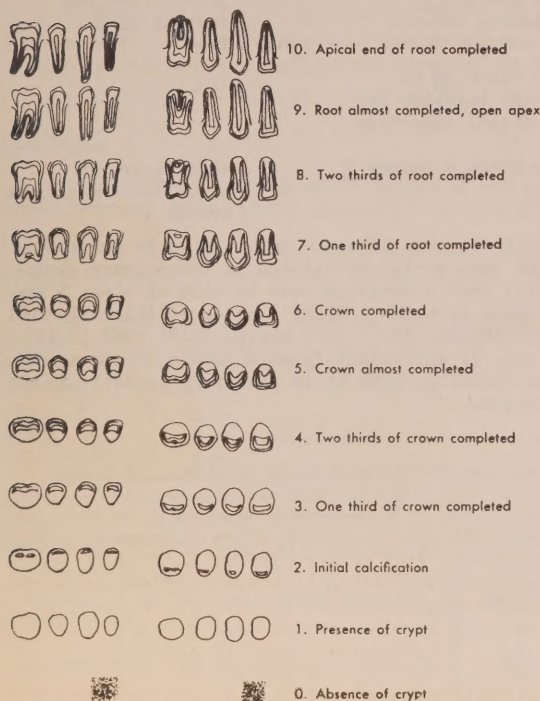


Fig 1

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Treatment Objectives

- Provide an eruption sequence of 345 in the mandible and 435 in the maxilla.
- Keep the mandibular teeth erupting well ahead of the maxillary teeth.
- Maintain or produce a Class I molar relationship.

Treatment Program

<u>Step</u>	<u>Purpose</u>	<u>Timing</u>
1. extract $\overline{C}\overline{D}$	a. to align incisors b. erupt $\overline{3}$ before $\overline{4}$	$\overline{3}$ at stage 6 or 7
2. extract $\overline{D}$ slice $\overline{E}$	a. allow $\overline{3}$ to erupt pointed distally b. hasten eruption of $\overline{4}$	when $\overline{3}$ eruption is affected by $\overline{D}$
3. place mandibular archwire and extract $\overline{E}$	a. prevent mesial drift of $\overline{6}$ b. erupt $\overline{5}$ before $\overline{7}$	when $\overline{4}$ eruption is halted by $\overline{E}$
4. place maxillary holding arch and extract $\overline{C}\overline{D}$ together	a. to prevent $\overline{6}$ tipping forward b. to allow $\overline{34}$ to erupt together in a distal direction	just before the removal of $\overline{E}$
5. extract $\overline{E}$	a. to erupt $\overline{5}$ before $\overline{7}$	when $\overline{34}$ are in place and the molars are $\overline{C1}\overline{I}$

The treatment program varies only slightly if space supervision is undertaken when a flush terminal plane or a mesial step occlusion existed in the primary dentition. If a flush terminal plane exists, then a decision must be made at steps 3 and 4 of the treatment program as to the means by which a Class I molar relationship will be produced. If there is space in the mandible for a late mesial shift then it is allowed to occur after $\overline{5}$ is in position. If sufficient forward growth of the mandible together with late mesial shift is not occurring, then it is necessary to actively tip the $\overline{6}$ distally to a Class I molar relation.

TABLE II.4B.—NORMS FOR MATURATION OF PERMANENT TEETH FOR BOYS (NOLLA¹)

Mean stage of calcification for each tooth is shown in terms of the 10 stages of calcification.

AGE, Yr.	MANDIBULAR TEETH (GROWTH STAGE)								MAXILLARY TEETH (GROWTH STAGE)							
	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8
3	5.2	4.5	3.2	2.6	1.1	5.0	0.7	—	4.3	3.4	3.0	2.0	1.0	4.2	1.0	—
4	6.5	5.7	4.2	3.5	2.2	6.2	2.0	—	5.4	4.5	3.9	3.0	2.0	5.3	2.0	—
5	7.5	6.8	5.1	4.4	3.3	7.0	3.0	—	6.4	5.5	4.8	4.0	3.0	6.4	3.0	—
6	8.2	7.7	5.9	5.2	4.3	7.7	4.0	—	7.3	6.4	5.6	4.9	4.0	7.4	4.0	—
7	8.8	8.5	6.7	6.0	5.3	8.4	5.0	0.8	8.2	7.2	6.3	5.7	4.9	8.2	5.0	—
8	9.3	9.1	7.4	6.8	6.2	9.0	5.9	1.4	8.8	8.0	7.0	6.5	5.8	8.9	5.8	1.0
9	9.7	9.5	8.0	7.5	7.0	9.5	6.7	1.8	9.4	8.7	7.7	7.2	6.6	9.4	6.5	1.8
10	10.0	9.8	8.6	8.2	7.7	9.8	7.4	2.0	9.7	9.3	8.4	7.9	7.3	9.7	7.2	2.3
11	—	—	9.1	8.8	8.3	9.9	7.9	2.7	9.95	9.7	8.8	8.6	8.0	9.8	7.8	3.0
12	—	—	9.6	9.4	8.9	—	8.4	3.5	—	9.95	9.2	9.2	8.7	—	8.3	4.0
13	—	—	9.8	9.7	9.4	—	8.9	4.5	—	—	9.6	9.6	9.3	—	8.8	4.9
14	—	—	—	10.0	9.7	—	9.3	5.3	—	—	9.8	9.8	9.6	—	9.3	5.9
15	—	—	—	—	10.0	—	9.7	6.2	—	—	9.9	9.9	9.9	—	9.6	6.6
16½	—	—	—	—	—	—	10.0	7.3	—	—	—	—	—	—	10.0	7.7
17	—	—	—	—	—	—	—	7.6	—	—	—	—	—	—	—	8.0

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TABLE II.4C.—NORMS FOR MATURATION OF PERMANENT TEETH FOR GIRLS (NOLLA¹⁷)

Mean stage of calcification for each tooth is shown in terms of the 10 stages of calcification.

Age, Yr.	MANDIBULAR TEETH (GROWTH STAGE)								MAXILLARY TEETH (GROWTH STAGE)							
	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8
3	5.3	4.7	3.4	2.9	1.7	5.0	1.6	—	4.3	3.7	3.3	2.6	2.0	4.5	1.8	—
4	6.6	6.0	4.4	3.9	2.8	6.2	2.8	—	5.4	4.8	4.3	3.6	3.0	5.7	2.8	—
5	7.6	7.2	5.4	4.9	3.8	7.3	3.9	—	6.5	5.8	5.3	4.6	4.0	6.9	3.8	—
6	8.5	8.1	6.3	5.8	4.8	8.1	5.0	—	7.4	6.7	6.2	5.6	4.9	7.9	4.7	—
7	9.3	8.9	7.2	6.7	5.7	8.7	5.9	1.8	8.3	7.6	7.0	6.5	5.8	8.7	5.6	—
8	9.8	9.5	8.0	7.5	6.6	9.3	6.7	2.1	9.0	8.4	7.8	7.3	6.6	9.3	6.5	2.1
9	10.0	9.9	8.7	8.3	7.4	9.7	7.4	2.3	9.6	9.1	8.5	8.1	7.4	9.7	7.2	2.4
10	—	10.0	9.2	8.9	8.1	10.0	8.1	3.2	10.0	9.6	9.1	8.7	8.1	10.0	7.9	3.2
11	—	—	9.7	9.4	8.6	—	8.6	3.7	—	10.0	9.5	9.3	8.7	—	8.5	4.3
12	—	—	10.0	9.7	9.1	—	9.1	4.7	—	—	9.8	9.7	9.3	—	9.0	5.4
13	—	—	—	10.0	9.4	—	9.5	5.8	—	—	10.0	10.0	9.7	—	9.5	6.2
14	—	—	—	—	9.7	—	9.7	6.5	—	—	—	—	10.0	—	9.7	6.8
15	—	—	—	—	10.0	—	9.8	6.9	—	—	—	—	—	—	9.8	7.3
16	—	—	—	—	—	—	10.0	7.5	—	—	—	—	—	—	10.0	8.0
17	—	—	—	—	—	—	—	8.0	—	—	—	—	—	—	—	8.7

Appliancing

The mandibular appliance of choice is the lower loop lingual archwire. It is removed when the lower second premolars are emerging from the gingiva.

In the maxilla a Hawley appliance with fingersprings may be used to good advantage to achieve the necessary distal tilting forces on the upper molars.

Any good orthodontic handbook will provide adequate instructions in the fabrication of these simple appliances. It must be borne in mind that the requirement for these appliances must have disappeared by the time the second permanent molar erupts into the arch.

Summary

Space supervision is an area of interceptive Orthodontics which may be successfully undertaken by the general practitioner. The recognition of the need for space supervision in any mixed dentition depends on the clinician's good judgement. The treatment objectives and the steps in the treatment program have been outlined.

1. Moyers, R.E. Handbook of orthodontics. 2nd Ed. Yearbook Medical Publishers Inc., 1963.
2. Brogan, H.W. Mixed dentition analysis. RCDC Quarterly, 8:9, Apr., 1967.
3. Nolla, C. The development of the permanent teeth. Ann Arbor, University of Michigan, School of Dentistry, 1952. Typed thesis.

Dentists should instruct patients to remove dentures for several hours daily in order to prevent papillary hyperplasia. Dentures and the oral tissues must be periodically examined in order to prevent the prosthesis from becoming a pathogen.

- Lambson, G.O., and Anderson, R.R.: Palatal papillary hyperplasia, J. Pros. Dent., 18:532, 1967.

SHOOTING DOWN UNDER

LCOL J.C. Brick, CD, DDS



The "World Series" of shooting for Commonwealth countries is the Empire Match. It is held annually in any one of the Commonwealth countries and in 1968 Australia was the sponsor. Canada sends a rifle team to England each year and occasionally to the United States. This year it was decided that a team should go to Australia. The news spread quickly in both New Zealand and Australia and as a result many invitations were received to compete in other matches to be held in Wellington, New Zealand, Tasmania, Sydney, Brisbane, Perth and other places.

The task of choosing a team belongs to the Dominion of Canada Rifle Association and just before Christmas I received an invitation to be a member. It solved the problem of what to do with my unused leave for the year.

The team consisted of fifteen shooters with representation from across Canada. The members assembled in Vancouver and on February 16th left Canada by Canadian Pacific Airlines. Canada was in a cold spell at the time; as soon as we left her shores the temperature began to rise. The first stop was Honolulu for a few hours and then a change of aircraft at Nandi in Fiji, where the temperature was 97 degrees at two a.m. with a gently falling rain.

The team arrived in Auckland New Zealand on Sunday morning, February 18th. As the date line had been crossed, Saturday the 17th never dawned for our group. A most gracious and warm reception was given to the Canadian team and this was to be our first sample of New Zealand hospitality. From Auckland we flew south to Wellington. The landscape was a surprise to everyone as the North Island is volcanic in pattern. Trees now grow up the sides of the old volcanoes and at present only one is still actively steaming. The New Zealand Airlines Pilot was most obliging and altered his course to show us points of interest. We arrived in Wellington at noon and at two p.m. the first shots were fired on the ranges.

The ranges at Wellington are in Trentham Army Camp. They are set out within a horse shoe of beautifully wooded hills that form a natural backstop. The grass is a lush green and is mowed every night by "woolly lawnmowers" that say baa-baa night and day. Having lived in Ontario and Quebec it is an amazing sight to see old cars with no rust. Cars are very expensive in New Zealand and consequently are very well treated and made to last. My own highlight was a ride out to the range in a 1926 Erskine. The car ran very well but the owner complained that he has had to re-upholster it three times. The matches went on every day until the following Saturday at five p.m. The next morning we had to leave the country, to our great disappointment, since our

Editor's Note:

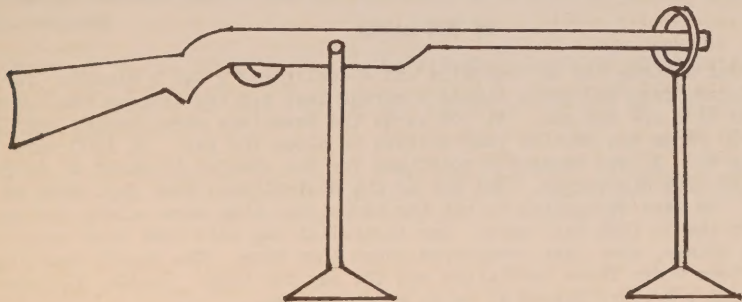
LCOL JC Brick is employed as Senior Staff Officer Dental Services, HQ Mobile Command. His interest in shooting began with an international match in Detroit, Michigan in 1936 and has continued since that time. During the intervening years he has competed in Canada, United States, Germany and England. In 1963 LCOL Brick was a member of the Canadian Army Regular Rifle Team representing the Canadian Army at Bisley, England. He is one of two officers in the RCDC entitled to wear the gold rifle awarded with the Letson Trophy (CAO 57-10).

schedule had been so tightly booked that it did not give us a chance to see this beautiful country or to accept the many personal invitations received. The Maori came to the rescue and put on a "hungi" for us. This is an outdoor cookout to end all cookouts. At noon they dug a pit and filled it with rocks which were covered with logs and a roaring fire was kept going for three hours. The ashes were then raked out and a side of a sheep was wrapped in burlap and placed in the pit on top of the stones. This was all covered with a layer of vegetables, more burlap and then filled in with earth. At seven p.m., with a few songs and ceremony the hole was opened and the food passed out. The food was very delicious with a heavily smoked flavour and was eaten from a board without the use of any mechanical devices. There were more songs, dances and chants by this really happy group of soldiers to close off a memorable evening. This celebration, in some way, compensated for our inability to stay in the country for a longer period.

The New Zealander is a very good marksman and has an excellent sense of sportsmanship. To give some idea of the high standard of the shooting, at one range I had a perfect score 50 out of 50. Several others did too, and to settle tied scores the shots are measured from the exact centre of the bullseye. My perfect score placed 41st on the prize list.

It was ANSET-ANA Airline next and over to Australia. This time the matches were being conducted in Sydney under the auspices of the New South Wales Rifle Association. Sydney is a large and beautiful city with a harbour measuring 900 feet deep in places. The ranges are located in a sea shore setting that is very pleasant. The breezes from the sea complicate the shooting but not as much as the signs along one low edge of the range which read "Keep Out - Tiger Snakes". We were assured that the snakes did not come out on the range but still when you are lying on a firing mound in shorts there does seem to be a "Oneupmanship of Gamesmanship" factor here.

From Sydney the team went on to the Katoomba Rifle Club located in Mountain City. It is the largest city in the world by area, encompassing 542 square miles. The population is about 5000, but I think that they are counting a few trees as well. This was an amazing range. It has only three firing positions and is 700 yards long. It is built up the side of a ravine so that each successive one hundred yard firing point is higher than the one in front. The 700 yard firing point is 200 feet higher than the targets. After the matches a civic reception took place in a very well appointed country club. The mayor and his council welcomed the visitors to Mountain City. We all returned to the ranges and planted two trees, a maple for the Canadian Team and a dogwood for the British Team. As this area is a dense forest of gum trees (Eucalyptus) these two will stand out as strangers. Incidentally, it would be difficult to speculate where they found a maple tree to plant.



Rifle Mounting For Blind Marksman

Time was fast approaching for the Empire Match. We flew down to Melbourne Victoria where the competition was to be held. When we arrived we received a challenge from the Royal Victorian Institute For The Blind Rifle Club. It turned out to

be a most interesting match. The sightless person fires from the standing position using an ordinary .22 calibre rifle. The target rifle is mounted on a swivelled post at its point of balance and the barrell passes through an iron ring about four inches in diameter. The rifle barrel is wired to give off an audible radio wave of a certain frequency and the iron ring is wired to give off a slightly different wave. When the rifle barrel is held in the dead centre of the ring the two waves cancel each other and there is absolute silence. At this exact moment the rifle is fired and a bullseye will be scored on a target that has been very precisely mounted in a frame 25 yards down the range. As we were a national team selected for shooting ability it was a slightly emotional experience to see these people enjoying our sport with a terrific enthusiasm. It was only natural that our captain called us aside and told us to shoot our best but the last two men were to keep the score down, and if it could be done discreetly, let the other team win. At the end of the second target we were trailing by five points and at the end of the match we were soundly trounced by 35 points. We asked out captain to elaborate further on the part about "easing up."

The team began five days of shooting that would culminate with the Empire Match. This match was fired at 300, 600, 900 and 1000 yards. Rain had not fallen in the area for nearly two years. The grass was very dry, a bright yellow in colour with a sheen like straw. The range faced out to be a beautiful ocean and the sky at all times was a cloudless blue. The temperature hovered around 100° with no humidity.



ON THE RANGE

It was a wonderful setting for an "umbrella and a cool glass", but a disaster for shooting. The glare from the grass caused a mirage that hid the targets which seemed to fade into the blue sky and sea. At 300 yards the Canadians were running away in the lead. At 600 yards the British Team started to close the gap. At 1000 yards the targets disappeared. It was necessary sometimes for the shooter to stand up to re-orientate himself with his target. But not so the Australians, they just shot on without effort. We were struggling to hit the target but they were calmly dropping their shots into the 30 inch bullseye. One Australian wag said that they could not see the targets either, they just remembered where they were. The superb shooting by the Australian Team under these conditions won the day for them. Canada, the present holder of the Empire Trophy, passed it on to a better team.

As mentioned earlier, we had numerous invitations to shoot in many cities. In order to accept as many as possible the team split up with members going to Hobart Tasmania, Sydney, Brisbane, Perth and a few other places with less familiar names.

As a break from shooting we spent a day picnicking in the Sir Colin Mackenzie Reserve. The flora and fauna are so unlike ours. Bell birds give a performance like a carillon in the tree tops from dawn until dusk. The kangaroo and his small cousin the wallaby were very friendly people. The emu wandered around looking for handouts. I never knew him other than as a three letter word for a flightless bird in a crossword. The kookaburra, the koala with the inevitable little passenger, the duck billed platypus, all seemed to be from another civilization. The dingo dog was the nearest relative to our animals and he was a very unfriendly individual.

The time arrived for the journey home. The hospitality had been tremendous, Service authorities and Customs most co-operative. Our High Commissioner's offices and staffs helped us on innumerable occasions. We left Sydney, Australia at 96° heading for Montreal at 20° below zero. The engines hummed a little out of synchronization sounding like "GO AWOL - GO AWOL", but being a dedicated person I never let such a thought enter my head, as the team captain held all the tickets.



The Sir Colin
Mackenzie
Reserve

The RCDC News

Division News

Brigadier-General BP Kearney, Director General Dental Services, attended the Annual Meeting of the Board of Governors of the Canadian Dental Association 24-26 Jun 68 after which he attended the C.D.A. Convention.

Division Postings

COL GR Covey has replaced COL LG Craigie as Director of Staffing and Training.

LCOL WR Thompson proceeded to the University of Toronto to continue post-graduate work in Oral Surgery.

LCOL LA Richardson arrived fresh from a tour as CO 4 Fd Dent Coy in Germany. He will replace LCOL G MacDougall in the Directorate of Treatment Services with the latter moving over to the Directorate of Staffing and Training.

Sports

The sand traps were no problem for Sgt Norm Eady as all of his experience in playing golf on the Sinai Desert came to the fore when he won 2nd Low Net of "D" Flight in the CFHQ June Golf Tournament.

Sgt Ken Shergold captured 1st Low Gross of "A" Flight in the Annual Ottawa Area Inter-Mess Tournament, and repeated with 2nd Low Gross in the CFHQ June Tournament.

Conferences and Meetings

COL GC Evans, MAJ C Gullekson and CAPT WH Dunnigan attended the Alberta Dental Association Convention 2-3 May 68 at the Chateau Lacombe, Edmonton.

Several Unit officers attended the Annual Meeting of the Canadian Dental Association 26-30 Jun 68 in Vancouver: on duty - LCOL JG Butler, MAJ PE Fafard and MAJ AL Kelland; on annual leave - LCOL Kettlys, MAJ Pyne, CAPTs Walls, Berezon, Ebert, Shearer, RB Andrews, Budzinski, Wilson, Ianctis and McNeil.

Training

CAPT BB Berezon and PTE Bernier JG accompanied 1 QOR of C to Norway on Exercise "Polar Express" 5-16 Jun 68.

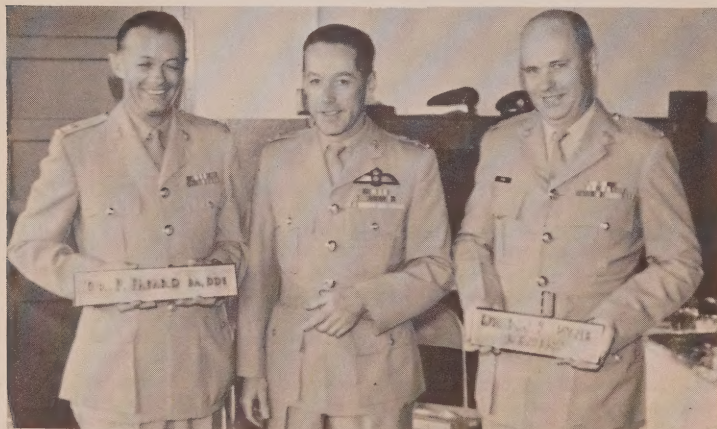
CAPT HM Amos and CPL Clifton HB were aboard HMCS Columbia on a training cruise in California waters 4-21 Jun 68.

Retirements

CAPT Lorne Proudfoot has retired from the RCDC after 26 years of continuous service. Lorne came up through the ranks as a dental assistant and was commissioned in 1960 as a classified officer. His final appointment was Administrative Officer of No 11 Dent Unit. A Unit party was held at CFB Edmonton SGTs' Mess on 30 May 68 to honour him on this occasion and he was presented with an executive briefcase as a memento from all ranks of the Unit. He has accepted a position at the University of Alberta as assistant to the Registrar. His many friends wish him well in his new career.

Majors RJK Pyne and PE Fafard retired from the Service this summer after having had long and varied careers with the Canadian Forces.

An all ranks party of both active and retired RCDC personnel in the Victoria area was held for these officers and they were presented with bronze professional name plates to be used in their civilian practices. Members of the Corps wish them and their families the best of luck for the coming years.



Presentations on Retirement

LCOL Kettlys presents name plates to MAJ Fafard (l) and MAJ Pyne (r)

Major "Terry" Pyne served with the NPAM from 1935 and joined the CA(A) in 1941. His war-time service was with the RCA and he served in the United Kingdom, the Mediterranean theatre and North West Europe. He was awarded the MC while serving in Germany in 1945. Graduating in Dentistry from McGill University in 1951, he joined

the CA(R) and since then has served with the Corps with 11 and 15 Units, 35 FDU and with UNEF in the Middle East. Terry is going into private practice in Montreal.

Major Paul Fafard joined the CA(A) in 1942 and saw service in Europe as an infantry officer. Following the War he entered Dentistry at the University of Montreal graduating in 1951. Since that time he has served with the Corps in a variety of postings across Canada and with 1 FDU (1955). Paul has established a practice at Williams Lake, BC where the hunting and fishing are reported to be superb.

12 Dent Unit

Armed Forces Day

A shining mobile dental van was on display in CFB Galetown with other exhibits for visitors on Armed Forces Day 8 Jun 68. PTE Kaye manned the display and is to be credited with the polish and cleanliness of the vehicle. One of the most interested visitors to the van was BGEN Drewry who, as senior RCDC officers know, is not unfamiliar with the Corps.

Sports



SGT Frank Martell of CFB Greenwood won the Annual Maritime Five Pin Championships held at Summerside PEI. He had the high average of 253 and the high single of 410.

SGT Martell with his trophies

SGT Glen Jennings also made the sporting news column by winning the Class "C" Event of the Opening Day Tournament held on 13 May 68 at Chester sponsored by the Halifax Garrison Golf Club.

Retirements

Major EMC Franklin is among those who have recently retired from the Armed Forces after many years of service. Claude served with the RCAF from 1940-45 and was awarded the DFC. Following the War he attended Dalhousie University and was commissioned in the Corps on graduation in 1952. It is understood that since his retirement he has again become associated with Dalhousie, this time in a teaching capacity.

Captain M Kostyniuk is retiring after continuous service with the Corps since 1941. Mike came up through the ranks as a dental assistant and clerk. He was commissioned as a classified officer in 1960 and his final tour of duty was Administrative Officer of No 12 Dent Unit. Apparently the call of the "great land" was too much for Mike and he has decided to settle in the West. Both of these officers have best wishes from their confreres in the Corps for a happy and successful future.

Farewell Party - A farewell party was held at Moosehead Breweries on 13 Jun 68 to present mementos and wish retiring and posted personnel the very best in their new environments.

13 Dent Unit

Accommodation

Upon completion of the new wing in April this year, No 13 Clinic at CFB Trenton became one of the largest and most modern clinics in the RCDC.

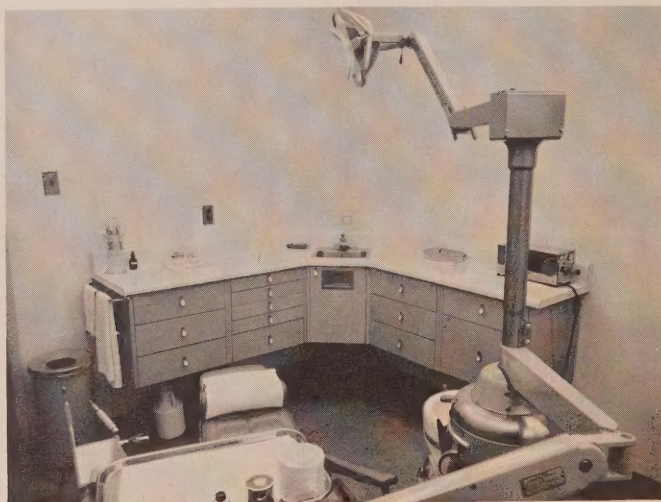
The new wing consists of six additional operating rooms, a large storeroom, a female change room, and has enlarged the clinic to an 11 operating room accommodation.

The installation of modulaire wall-mounted cabinets, folding doors, very good indirect lighting plus a redesigned orderly room and waiting room gives a pleasant appearance as well as having improved the working conditions.



SGT Schell EL at the reception desk of the new waiting room

Modulaire wall-mounted cabinets in one of the new operating bays



Meetings and Conferences

COL RHG Cunningham, CAPT DA Humphreys, CAPT RG Kerr and CAPT RE Warren attended the Ontario Dental Association Convention in Toronto 12-15 May 68.

MAJ AG Taylor of the RCDC School spoke to the Bay of Quinte Dental Society in the Oak Room of the Trenton Officers' Mess on 10 Apr 68. Subjects presented were, Fin-Retained Amalgams, Advanced Concepts of Operative Dentistry and MAJ Taylor's Easter Island trip. The presentation was received with much interest.

Special Events

Dental personnel in the Trenton area held an enjoyable social gathering on 20 Jun 68 at the social centre CFB Trenton to honour LCOL and Mrs Butcher, WO and Mrs Posyluzny and SGT and Mrs Schmelze prior to their departures on posting. WO "Frank" Heard was also presented with a memento and wished good fortune on civvy street when his call-out ceases this autumn.

14 Dent Unit

Briefing by DGDS

An informative briefing on the RCDC Preventive Dentistry Program was given by Brigadier-General Kearney to staff officers at TCHQ CFB Winnipeg 10 Apr 68. This program was received with enthusiasm and seen as a major attempt to cope with a problem heretofore unresolved.

Special Events

A farewell was given to LT Bowness 8 Apr 68 by personnel in the Winnipeg area when all gathered at the Curling Club to present him with a "Red River Cart" prior to his departure for Staff Course in Toronto and on posting to No 12 Dental Unit, Halifax.

The Annual Posting Party was held at CFB Winnipeg 14 Jun 68.

Clinic at Fort Churchill Closed

LCOL Anglin and CAPT Doyle visited Fort Churchill 14-15 May 68 at which time all dental equipment at No 8 Clinic was turned over to DFW. CAPT Buchholz, the last dental officer to be stationed at Churchill, together with his staff of CPL Russell and Miss Beattie ceased duty in the area 1 Jul 68. The dental equipment will eventually be turned over to the Fort Churchill General Hospital for use by a civilian practitioner who it is hoped will become available in the near future.

Commendation - CAPT JJJ Jacques

During a duty visit to CFS Sioux Lookout, CAPT Jacques performed dental examinations for all Station personnel. The oral soft tissue examination for one patient prompted him to perform a biopsy of an area of the tongue the results of which proved that the tissue in question was malignant.

In part, the commendation forwarded by DGDS read as follows: "The example set by CAPT Jacques in this early detection of cancer and the measures he instituted for its treatment provide a source of pride and gratification for all of us. He has quite possibly extended the life span of his patient; at very least he has spared him considerable disfigurement. I wish to add my commendation of his professional skill and behaviour to that expressed by the Commanding Officer of CFS Sioux Lookout."

15 Dent Unit

Professional Meeting - Preventive Dentistry

The Société Dentaire de Montréal held its May meeting at CFB St Hubert on 18 May 68. The theme of the professional portion of the meeting was "methods and procedures in Preventive Dentistry." The aim of the program was to establish better

public relations and contacts with the civilian dental organizations in the area.

The social meeting took place in the St Hubert Officers' Mess with a candle-light dinner and introductory speeches by the Base Dental Officer MAJ R Roy and the Dental Public Health Officer Dr P Guevremont. This was followed by a visit to the Base Dental Clinic with WO R DeBlois as the informative hygienist, MWO H Franzgrote as the demonstrating therapist and CPL M Arbour as the laboratory technician willing to sacrifice a long weekend Saturday evening for the cause of better public relations. CAPT G Charron had previously prepared the cavities and supervised the restorative procedures.

The following subjects stimulated a lively interest from the civilian dentists:

1. employment of the therapist and hygienist;
2. the Preventive Dentistry Program in the Canadian Armed Forces.

RCDC personnel were interested in civilian reactions to the team concept in the Corps. It may be well to have answers ready for arguments such as these, referring especially to the therapist: uneconomic for a single operator practice; would mean changing our whole dental organization; could not afford such an auxiliary; this would mean group practice; No 3 Hollenbach, must make a note of that instrument; do you make your own models for demonstrations; are impressions taken by an auxiliary; when cement base is damaged to you correct it before filling; etc.

While WO DeBlois explained technical points about the auxiliary dental trades in the RCDC and MWO Franzgrote was busy restoring three multiple cavities under scrutinizing eyes in an overcrowded room, the dental officers were involved in intense discussions with their civilian colleagues and former university teachers explaining why the dental therapist has become an appreciated member of the dental team; and why in their opinion, such progressive personnel developments should become accepted by the dental profession as a whole. Ideas were discussed in recognition of auxiliaries in other fields, respective employment, training, technical skills, prerequisites, organization and control. The medical profession has set an example in co-operation which permits truly professional qualifications to be elevated to a level beyond the pure technical, which can be delegated. The dentist should be able to take a similar position to that which the medical doctor and engineer have successfully claimed for themselves for years.

Complimentary comments were made on the layout, design and cleanliness of the clinic facilities. Some of the visiting ladies and gentlemen became so interested that they almost forgot the dance in the Officers' Mess.

Special Events

Retirement Dinner - CAPT AM GAREAU

A Mixed Dinner was held 21 May 68 at CFB St Jean to "dine-out" CAPT and Mrs Gareau. COL and Mrs Cornish and many dental officers and their wives attended, plus over 100 from the Base. An RCDC plaque was presented to CAPT Gareau on behalf of the Corps officers and a bouquet of roses to Mrs Gareau.

It is pointed out that CAPT Gareau joined the Active Force 2 Sep 39 and has served with the Corps since 1940. He came up through the ranks as a laboratory technician and was commissioned as a classified officer in 1964. It is understood that Ben has accepted an appointment with the Dental Faculty of the University of Western Ontario. Best wishes from his friends in the Corps go with him in his new career.

Forensic Dentistry

MAJ JFA Marcil attended a murder trial 17 Jun 68 (not as a suspect) and was called upon to determine whether or not there was any relation between a skull and

dental documents concerning an ex-soldier who was shot seven years ago. After replacing the teeth in the skull, it was very evident that skull was that of the person whose dental condition was recorded in the dental documents. The lawyers felt that this information would be invaluable during the course of the trial.

The RCDC School

Change of Command



Colonel GR Covey (seated) outgoing Commandant of the RCDC School is shown with his successor Colonel IG Craigie during the recent Change of Command ceremony at the RCDC School. Colonel Craigie assumed command on 2 July, 1968.

The RCDC School Golf Tournament

The Annual RCDC School Golf Tournament was held at the Circled Pine Golf Course, Base Borden on 19 June 1968. LCOL AG Andrews, Chief Instructor of the RCDC School won the event of the day, The Fletcher Trophy, for 1st Low Gross.

Outstanding Candidate

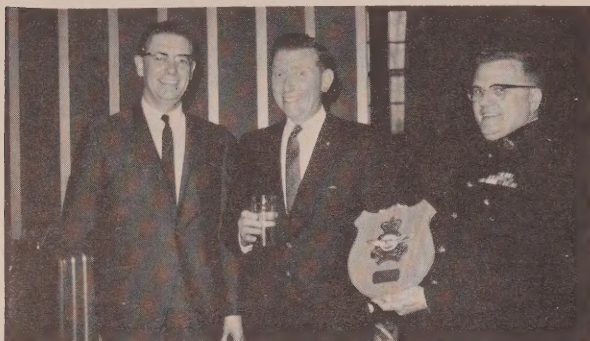
The Chief Instructor of the RCDC School, LCOL AG Andrews presented the LCOL DH Protheroe Trophy to the outstanding candidate on the 721 Dental Assistant PL 3 course, CPL A Busse, on 19 April 1968. A miniature cup is given to the recipient for his retention.



Retirement

1 Dent Unit

WO CA Chartier retired from the Forces on 1 May 68. He served in the Corps from 1941-46 and rejoined during the Korean conflict in 1950. His last appointment was as Chief Clerk with No 1 Dent Unit.



A Unit party was held at CFB Rockcliffe to honour WO Chartier and extend best wishes on his retirement.

L to R - LCOL WH Harrington,
WO Chartier and MWO Riddel DW

Why Not Have Your Own Aircraft?

During the autumn of 1966, Captains Tukums and RD Andrews obtained their pilots' licences at the Rockcliffe Flying Club and the following year they purchased a 65 h.p. Taylorcraft. With CAPT Andrew's recent posting, CAPT Tukums became sole owner of the aircraft.

CAPT Tukums with his aircraft

Statistics

cruising speed - 85 mph
maximum altitude - 9,500 ft
over-all running cost -
approximately \$3.50 per hr
approximate value of aircraft - \$3,000.00
flying time - as much as possible



1 Dent Eqpt Dep

Duty Trips and Visits

MAJ PL Griffiths accompanied LCOL Fletcher on a liaison visit to Halifax, St Jean, Trenton, Winnipeg and Edmonton.

Retirements

CWO EC Carpenter has retired from the Armed Forces after continuous duty dating from 1942. "Ernie" transferred to the Dental Corps in 1943 and served as a DA until he remustered to the Dental Equipment Repairmen's trade in 1952. His final appointment in the Corps was at No 1 Dent Eqpt Dep, Petawawa, as Warrant Officer in charge of the technical repair section. He has accepted a position with the Dental Faculty, University of British Columbia. Best wishes from his friends in the Corps go with him and his family in their new environment.

CWO AG Ponton joined the Active Army in September 1939. He transferred to the Dental Corps early in the War and served as a dental assistant. He accepted his release in November 1945. He enrolled in the Regular Force in 1949 becoming a storeman clerk - the trade which he pursued until his retirement. It is understood that Alex is entering business in Calgary and he is wished the best of luck in this new enterprise.

4 Fd Dent Coy

Change of Command

LCOL GE Windsor assumed command of 4 Fd Dent Coy on 6 Jul 68 replacing LCOL LA Richardson who has been posted to DGDS.

Conferences and Meetings

The regular Dental Officers' Professional Meeting was held 10 Apr 68. CAPTs Griesbach, Wood and Bellerose presented the highlights of the US Army General Dentistry Training Seminar, which they attended on 4 and 5 Apr 68.

On the same date the NCO Study Group met with presentations from CPL Tweed entitled "A Spoonful of Sugar" and CPL Audet entitled "Scuba Diving".

On 15 May 68 the dental officers hosted a professional meeting at the Officers' Club, at which RADC Officers of the British Army of the Rhine provided an excellent program with the following speakers:

COL ED Stanhope, MBE - Cases of Interest,
LCOL R Docherty - Two Part Partial Dentures, and
MAJ M Sheard - Removable Orthodontic Appliances.

On 29 May 68, the US Army Dental Officers at Rothwesten, near Kassel, hosted the professional meeting. COL Thompson spoke on "A New Concept of Preventive Dentistry" and Dr Hienrich Hornung, Public Health Officer for the City of Kassel, spoke on "Fluoridation". Kassel is the only community in West Germany with artificially fluoridated water.

Special Events

No 4 Fd Dent Coy Rotation Party was held in the 600 year old "St Georges Keller" in Soest on 10 May 68. It was a very enjoyable evening of good music, excellent food, and suitable moments were presented to departing members - LCOL Richardson, MAJ Paturel, MWO Everett, SGT Christiansen, SGT Petersen, CPL Levesque, CPL Sykes.

Sports

A small bore rifle team consisting of CAPT Griesbach, WO Dion, SGT Schuh, SGT Wylie, CPL Audet, CPL Sykes and four personnel from 2 PPCLI, placed second in a NATO Small Bore Rifle Competition, on 29 Jun 68. The competition was sponsored by The German 423 Panzer Grenadier Battalion in Bremen, Germany.

35 Fd Dent Unit

Special Events

An all ranks dinner dance was held in Lahr on 10 May to say farewell to SGT Reg Malpas on his retirement and to members of the Unit who are returning to Canada. SGT Malpas was presented with a crystal vase and Mrs Malpas with a dozen roses. Gifts were also presented to the members rotating to Canada.

Sports

A golf tournament was held at Soest on 3 May between members of 4 Field Dental Coy and 35 Field Dental Unit. The weather and the golf course were excellent, which is more than can be said for the caliber of play, however 35 Field were the winners and avenged themselves somewhat for the curling defeat suffered in February.

4 Fd Dent Coy's report on this event has a somewhat different tone. It reports that MAJ Mason out-putted WO Minnelli on the 18th green to win low net.

Dent Det Cyprus

Leave

CAPT Nadeau enjoyed a tour of the Holy Land from 14-20 May 68, visiting places of Biblical interest such as Jerusalem, Bethlehehem and Nazareth; and also the thriving, modern metropolis of Tel-Aviv.

In Memoriam

MWO RG Fortin died in hospital 10 May 68. This was a great shock to all of his friends and acquaintances and he will be sadly missed both in the Unit and throughout the Corps. He signed on with the Active Army in 1943 and joined the Regular Force in 1946. He served at various locations in Canada and had a tour of duty in Korea. Those who attended courses at the RCDC School while Roger was on staff will remember that he was always eager and willing to lend a helping hand. As a clinical technician he couldn't have shown more enthusiasm and zeal for his trade. His loyalty to the Corps could only be challenged by his unbending support to "Les Canadiens" as anyone who served with him or attended an RCDC Bonspiel will testify. A military funeral was held for him in Ottawa 13 May 68. Deepest sympathy is extended from all members of the Corps to his widow and children.

Professional Training

University of Toronto

LCOL	WR	Thompson	- Oral Surgery	- 1 Jul 68 - 30 Jun 69
Major	IW	Susser	- Dental Public Health	- 3 Sep 68 - 25 Jun 69
Major	JJN	Wright	- Periodontics	- 3 Sep 68 - 31 Aug 69

Walter Reed Army Medical Centre, Washington, DC, USA

Major	NH	Andrews	- Advanced Theory and Science of Dental Practice	- 27 Aug 68 - 27 Jun 69
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Training

RCS of S - Canadian Forces Base Barriefield

Sr NCO Course - 12 Jun - 31 Jul 68

CPLS Harkin PE, Thorburn JH, Hannah BF, McRae H, Longford MD, Nadeau IJP

Promotions

To Major - JJLG Girard, RM MacDonald, FC Arpin, GD Dippel, JR Robertson
To Sgt - CS Brown, TR O'Marra
To Cpl - GR Burt, NG Jones, MGE Williams, WA Hurding

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Sgt J Leonard, Cpl DT Langford, Pte (AF)(W) MML Dumont

<u>1968 DOTP GRADUATES</u>	<u>UNIVERSITY</u>	<u>POSTED TO</u>
CAPT KEH Rosengart	Alberta	CFS Holberg
CAPT RCA Fearon	Alberta	CFB Calgary
CAPT JF Stengl	Alberta	CFB Cold Lake
CAPT PE Arnold	Alberta	CFB Rockcliffe
CAPT DA Graham	Alberta	RCDC(S) Borden
CAPT DJ Morrow	Manitoba	CFB St Hubert
CAPT DW Pettigrew	Toronto	RCDC(S) Borden
CAPT HW Wilford	Toronto	CFB Winnipeg
CAPT EL MacInnis	Toronto	CFB Halifax
CAPT G Gunther	Toronto	CFB Halifax
CAPT PA Wood	Toronto	CFH Kingston
CAPT WEJ Nind	McGill	CFB Rivers
CAPT DE Gibbs	McGill	CFB Petawawa
CAPT JR Campbell	Montreal	CFB Valcartier
CAPT G Jalbert	Montreal	CFB Cornwallis
CAPT RP Meunier	Montreal	CFB Bagotville
CAPT JG Dessureault	Montreal	Ottawa
CAPT EG Schroeter	Dalhousie	CFB Gagetown
CAPT CH Hawkins	Dalhousie	CFB Greenwood
CAPT PFG Stirling	Dalhousie	CFB Uplands

Retirements and Releases

Majors DJ Garmichael, PE Fafard, EMC Franklin, RJK Pyne; Capts JHGR Charron, AM Gareau, M Kostyniuk, MB Kricken, EL Proudfoot, Dr JA MacGowan; CWOs EC Carpenter, AG Ponton; Sgts ES Knoll, RA Malpas, HM McGurdie; Cpls RF Abfalter, WE Russell, GB Bristow, AL Estabrook; LCpl FW Crich; Cpls (AF)(W) LE Mattatall, (AF)(W) JM Mackie; Pte JOW Paquet; Ptes (AF)(W) MB Bond, (AF)(W) CJ Acres and MHM Levert

Vital Statistics

Births

Son - CAPT and Mrs JIPA Berthiaume, CAPT and Mrs JAA Boucher, CAPT and Mrs CJM Boston, CAPT and Mrs JG Dessureault, CAPT and Mrs CW Kearns, CPL and Mrs WETweed

Daughters - CAPT and Mrs AD Stewart, CPL and Mrs RK Delmage, CPL and Mrs WR McIntosh

Notice

Remember the Sixth Annual RCDC Golf Tournament to be held at CFB Borden 20-21 Sep 68.

Consolidated entries and fees should be forwarded to arrive at the RCDC School not later than 6 Sep 68.

Let's make this year's tournament the "greatest".

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Quarterly



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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

Editorial Board: COL JW Turner
LCOL LA Richardson
MAJ JVP Chatwin

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Cover Photograph

BGEN BP Kearney, Director General of Dental Services accompanied by 2LT DK MacKenzie, Parade Commander and CAPT R Peebles inspects 3rd Phase DOTF candidates.

Front Row - Right to Left - 2LTs RW Rix, OW Donald, LR Holland

More DOTF photographs on pages 25 and 26.



ST APOLLONIA

Virgin and Martyr
Patron Saint of Dentists

In 1967 the dental officers of 4 Fd Dent Coy acquired this early Baroque painting of St Apollonia which they have presented to the Royal Canadian Dental Corps. The donors were:

LCOL LA Richardson
MAJ MN Deyette
MAJ RJ Paturel
MAJ DR O'Hara
CAPT (now MAJ) GW Hill
CAPT (now MAJ) AN Swanzey
CAPT H Griesbach
CAPT GR Nye
CAPT HS Wood
CAPT JRC Bellerose
CAPT RM Depledge
CAPT RJ Shirkey

St Apollonia, an aged deaconess, was seized by the heathen populace of Alexandria in AD 249 during the reign of the Emperor Philip. After knocking out her teeth the mob threatened to cast her into the fire unless she denied her faith. She threw herself into the flames to convince her persecutors that her sacrifice was perfectly voluntary.

We find churches and altars dedicated to the honor of St Apollonia in most parts of the Western World but she is not venerated in any Oriental church, though she was martyred in Alexandria.

St Apollonia, whose birthday is celebrated on the 9th of February, is invoked against toothache and all dental diseases and is shown in art with a pair of pincers holding a tooth or with a golden tooth suspended on her necklace.

THE DEVELOPMENT OF FLUORIDATION

2 LT GFF Greenacre



Many years ago, epidemiology studies reported that inhabitants of certain areas had a remarkably reduced caries incidence. This was early in the nineteenth century, long before "Crest". Some medical investigators suggested this was due to some specific factor in their water supply. However, it took almost one hundred years to subsequently explain the concept of fluoridation and to begin applying it as a public health measure. The following are some of the most important dates in the development of this concept:

1874 - surprisingly enough, one European doctor was said to have recommended potassium fluoride lozenges for children and expectant mothers as early as 1874. However, whether this was done for the fluoride or potassium content is not ascertainable.

1890 - two researchers, Dr Creckton-Brown and Dr Michel, both expressed a belief that fluoride might be of value in dental health.

1900 - an American Army doctor, Dr J Eager, stationed in Venice, Italy, wrote home describing different dental conditions to his friends in the United States Public Health Service. He mentioned the blackened teeth of Chiaie's disease in northern Italy. Apparently, this was locally attributed to having drunk, during infancy, water that had been "charged under pressure with volcanic fumes". Moreover, he noted that most young Italians in central Italy had surprisingly strong healthy teeth.

1920 - once again, the harmful effects of fluoride were observed. At Johns Hopkins University, Dr EV McCollum administered fluoride in a concentration of 250 ppm to rats. The results were disastrous.

1900-1931 - during this period of time, several studies were conducted on the mineral content of water and the dental implications. One man suggested that it was the complete lack of fluoride that caused weakened enamel. More significantly, Dr FS McKay theorized in 1929 that mottled enamel and a higher caries resistance were due to the relative concentration of fluoride in drinking water. This widely read publication provided a great stimulus for subsequent experiments.

1931 - three almost simultaneous experiments demonstrated that the sole cause of discoloured teeth was the concentration of fluoride in the water.

1930-1945 - for fifteen years, Dr H Trendley Dean devoted himself to researching areas in North American to evaluate the optimum fluoride level for water supplies. In 1944, he published his "study of twenty-one cities" which recommended that communities should increase or reduce the fluoride content in their drinking water to 1 ppm to develop healthier caries-resistant teeth. By late 1944, he had encouraged Dr WH Tucker to become the first municipal health commissioner to authorize the design and construction of a town fluoridation project.

1945 - certain communities, Brantford, Ontario; Newburgh, New York and Grand Rapids, Michigan, adjusted the fluoride content of their water supplies by using fluoride salts fed by an automatic mechanical apparatus.

SYSTEMIC FLUORIDES

A variety of consumable forms of fluorides has been suggested in areas where there is not a piped water supply. For example:

In Geneva, Switzerland, school children were given chewable tablets containing one milligram of fluoride on a daily basis. Results showed a 30-50% decrease in diseased, missing, or filled teeth.

In Sweden, health officials have experimented with fluoridating bread for rural areas.

Some people have suggested fluoridated rice for Asian countries. Also there have been similar ideas for fluorides in milk and even in sugar.

However, there have been several setbacks in developing the "ideal" systemic fluoride for underdeveloped countries and rural areas: the correct dosage is hard to calculate due to international differences in the diet; also expense is a factor for many governments (i.e. tablets, milk, sugar). Finally, there is the technical problem of finding a method to combine a fluoride with a food product while keeping the ions in a shelf-stable yet potentially active form. Fluoridated salt may prove to be the closest we can get as an ideal systemic fluoride.

Research for an ideal rural systemic fluoride has suggested that fluoridated salt is the simplest, safest, and most inexpensive method yet developed. A dosage of 300 mg. "F"/kg. salt has been suggested after studying ethnic and age differences in salt consumption. This allows for a maximum pre-eruptive period intake of 5 g. salt/day and a maximum post-eruptive intake of 25g./day. Finally, experiments have shown that when tricalcium phosphate is added to table salt containing either calcium fluoride or sodium fluoride, the product is both shelf-stable and potentially re-active in the human body.

At present in four isolated Andes villages in Columbia, dental health officials are conducting an experiment to compare the relative efficiency of salt and water fluoridation. This is being financed by the USPHS and may prove someday to be classic reference material. One village receives fluoridated water, one table salt with Ca (F), another salt with NaF, and the fourth will act as a control. Also, a close watch is being kept on the health of the hard and soft tissues in these people by taking x-rays of the metacarpophalangeal joints and blood and urine analysis. So far, the experiment has had enthusiastic cooperation from all the people involved. One observer, impressed by the ingenuity of this experiment, commented:

"North Americans pioneered fluoridated water; Sweden developed fluoridated bread, and now Columbia is leading the way to fluoridated salt. - Will France fluoridate wine?"

TOPICAL FLUORIDES

As the concept of preventative dentistry evolved it became apparent that the use of systemic fluorides was only half of the fluoridation story. Only recently have the additional preventative effects of topical fluorides been fully realized. Several forms of topical fluorides have been developed:

Dentifrices

Currently, most fluoride toothpastes show a 20-30% reduction in caries, but it is hoped to improve them by increasing the number of reactive fluoride ions. Initially, the problem of maintaining ion activity with long shelf-life had to be overcome before going on to the market. At present, researchers are trying to solve the problem of a slow diffusion rate into enamel and ion inactivation due to complex formation and water binding.

Mouth Wasnes

A 10 ml solution of .05% NaF daily or a 10 ml solution of .2% NaF weekly has proven to be equally effective in reducing caries. The method used depends on individual preferences. Both tooth brushing and the use of a fluoride mouth wash are part of the US Navy's new experimental dental health programme.

Prophylaxis and Polishing

Fluoride preparations are recommended for prophylaxis on patients with a high caries index. Further, it is claimed by some that polishing procedures wear away the fluoride rich surface layers of enamel. It is advisable to prevent this if possible and a NaF-pumice preparation is now available commercially.

In general, the use of topicals depends on the attitudes of the dentist. This reminds me of a story I heard recently. Apparently, one dentist advises his patients when they leave his town that - "if you want to make sure you are choosing one of the top dentists in your new town - try phoning up the local dental supply company and find out which man uses the most topical fluorides".

Within the profession, one of the most significant consequences of fluoridation is the great impetus it gave to developing the philosophy of PREVENTATIVE DENTISTRY. In many areas of the world, a rapid utilization of these concepts is desperately needed to help offset the acute shortage of dental health personnel and the steady increase in dental disease.

PRINCIPLES OF FLUORIDES

Systemic

A concentration of fluoride of .8-1.2 ppm in drinking water is calculated to be within safe limits for even the greatest consumer of water. It is claimed that the permanent teeth will only derive the full benefits from systemic fluoridation if started before the age of two years. However, after the age of nine, no ill effects can be seen in people drinking water containing up to 15 ppm F. Also, it seems that the only tissues adversely affected within this range of 1.2-15 ppm are the teeth. Apparently, tooth mottling is the most sensitive reaction of the body to fluoride levels even slightly above 1.2 ppm.

When an individual drinks fluoridated water containing 1 ppm F, during his pre-eruptive years the body develops an increase of 300 ppm F concentration in surface enamel. The fluoro-apatite crystal so formed is larger and more perfectly shaped. Also, there is less carbonate incorporated into the crystal. This fluoro-apatite becomes concentrated in the outer enamel areas and any subsequent recalcification areas. Thus a denser, less soluble and more caries resistant tooth is formed.

All the oceans and a lot of fresh-water areas are naturally fluoridated. For aeons tooth-bearing creatures of the seas have benefited from fluoridation. Since many biologists have compared man's extra-cellular fluid to sea-water (i.e. physiological saline .7% NaCl), it might be possible to carry this comparison one step further. It is probable that as sea-animals evolved to land, they lost the benefits of having their hard-tissue-forming cells exposed to an extracellular environment containing fluorides. Perhaps this would be a good argument for profluoridationists regarding the physiological and psychological benefits of fluorides. Recently, Soviet scientists have said that fluorides tend to decrease the deposition of strontium 90 in hard tissue - "one group had 25% less strontium 90!" At Harvard, researchers have theorized that fluorides tend to help keep calcium deposited in hard tissue and prevent calcium accumulation in the soft tissues. Thus, it has been indicated that there is less osteoporosis and hardening of the arteries in fluoridated areas.

Topical

There are some differences in the actions of topical fluorides which have to exert their influences by an "outside-in" route. First of all, topical fluorides are much more highly concentrated. Further, the effectiveness of their action depends on several factors:

- | | |
|------------------------------------|---------------------------------|
| a. other fluoride sources | c. the frequency of application |
| b. the caries index of the patient | d. patient cooperation |

More specifically, topical fluorides have a much greater effect on smooth surfaces than on pits and fissures. Other researchers have postulated that the presence of fluoride in dental plaque makes an oral environment unsuitable for the proliferation of *lactobacillus acidophilus*. Thus, it can be surmised that post-eruptive fluorides are just as important in maintaining caries resistance as pre-eruptive fluorides are for inducing this condition.

SOCIO-POLITICAL ASPECTS OR THE BATTLE OF TOOTH OR CONSEQUENCES

Every year, fluoridation is alternately condemned and recommended, shelved and reviewed, and discussed and cussed. The main problem is that in many cases, we simply have been unable to transfer known scientific concepts into practical simple terminology. Essentially, a communications midwife is needed to relieve the scientist of his labour pains and deliver the information to the public. I believe that the Universities should make up a larger part of this communications link.

In many unsuccessful fluoridation campaigns, the problems have been a lack of proper preparation and a poor presentation. Often, the profluoridationists tried to go too far too fast and succeeded only in frustrating themselves and arousing public suspicion. Nevertheless, when some of the arguments against fluoridation (i.e. mass medication with rat poison; communist plots; it is against God's will, etc.) are compared with the presented facts, it becomes hard to believe that man is a rational animal. It seems that humans respond more to "how" the fluoridation campaign was conducted, than to "what" was presented. Lately, many referendums have been won by simply using the right publicity, for instance, some dental associations have made cash offers of "\$1,000.00 for anyone who can prove that their health was adversely affected by fluorides properly administered"; various gimmicks and jingles have helped too in the promotion of this health measure.

Politically, it is very interesting to note that the more democratic a country the harder it has been to start fluoridation. Californians annually reject fluorides in their drinking water, while Puerto Rico is 93% fluoridated. Similar acceptance is found in most totalitarian states. In summary, it seems that the two factors of "how" and "where" are very important to the success of a fluoridation campaign.

In Canada, 25% of our population has fluoridated water. As Dr PC Staples mentioned recently in Montreal - "Never was so much public health gained for so little". Yet Quebec makes up only 6% of all Canadians receiving these benefits. More specifically, Montreal remains one of the last major Canadian cities without fluoridation. All past attempts have failed to produce action from the authorities. Unfortunately, most of the local dentists are apathetic towards further attempts and some are even in opposition. All this in spite of the fact that there are higher standards of practice and higher incomes for dentists in fluoridated areas. Nevertheless, some of this conservatism is understandable when the past history of local fluoridation efforts is considered.

* Editor's Note

There are 13 references which are available on request.

COMMENTS ON OCCLUSION IN THE CONSTRUCTION OF COMPLETE DENTURES

MAJ GDV Dippel, DDS



One of the most important steps in complete denture construction is the development of occlusion. Unfortunately, this procedure is often neglected by the dentist and relegated to the laboratory technician.

This article presents some current thoughts regarding occlusion for complete dentures in general and in particular recommends the employment of monoplane occlusion, outlining reasons for its use and the technique employed.

WHAT IS MONOPLANE OCCLUSION?

Monoplane occlusion may be described as an occlusion without a compensating curve. Either cusped or cusplless teeth may be used.

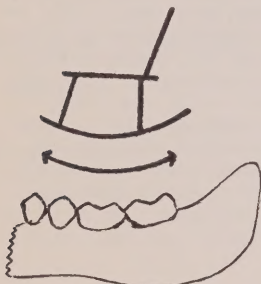


Fig 1

Unfortunately, it is common practice to use a full complement of posterior teeth when constructing complete dentures and in many cases the last molar encroaches on the "lower molar slope". In these situations an exaggerated compensating curve is developed causing the denture to rock like a rocking chair against the lower ridge. The resulting denture instability produces adverse stresses on the residual ridge. A reduction in the number of posterior teeth permitting elimination of the compensating curve, will help to limit this action.

DEVELOPING MONOPLANE OCCLUSION

a. Articulator

In order to develop a monoplane occlusion it is necessary to use an articulator with a flat incisal guidance table. The Hanau Model H2 satisfies this requirement. The Model H has a curved incisal guidance table and cannot be used in this technique because it builds in a fixed compensating curve, however, a conversion kit is available to change the cup-like incisal table to the required flat plane.

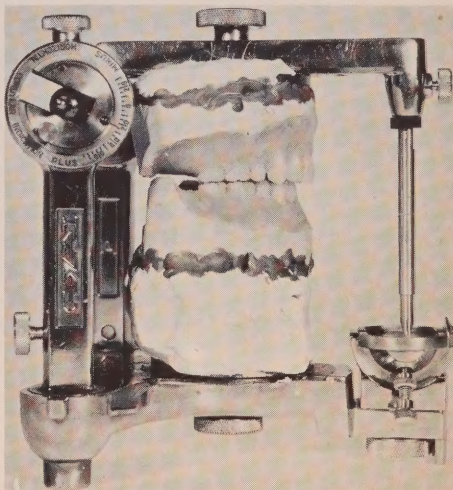


Fig 2

b. Records

Great care must be taken in making the centric record as accuracy is paramount at this stage. The face bow is used to mount the maxillary cast on the articulator in the usual manner and the mandibular cast is mounted using the centric record. The teeth are then set in centric relation and the rims are transferred back to the patient. The accuracy of the articulator mounting is confirmed by use of plaster check bites. At least two coinciding check bites are necessary to verify the centric record. If this record is not verified in this manner a remount of the lower cast is necessary. Protrusive records are then made to establish the condylar element readings.

c. Incisal Guidance

This is the only factor requiring a setting on the articulator which can be arbitrarily determined by the operator. When developing monoplane occlusion the incisal table is set at zero degrees.

d. Cusp Height

Cusp height or cusp rise is determined by the condylar guidance and incisal guidance. In this case the incisal guidance is set at zero degrees and the condylar guidance readings are variable as determined by the protrusive record. Cusp height may be determined by averaging the difference between the incisal and condylar guidance readings. If by this calculation the cusp height is 15° , the stock tooth selected would be a 20° posterior (closest to 15°) and the difference of 5° reduced to attain anterior posterior balance. The lateral cuspal inclination of the so called 20° posterior tooth is actually 17° . The required reduction of the lateral cusp rise will vary as the cusp rise will be greater as it approaches the condyle and less as it approaches the incisal guidance table.

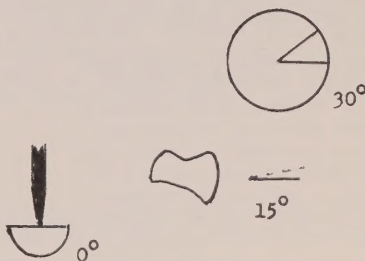


Fig 3

e. Positioning of Teeth

Anteriors

The incisive papilla is perhaps the most constant landmark in the mouth, in that its position remains constant throughout life. The maxillary centrals should be positioned approximately 9 mm anterior to the incisive papilla. Soft tissue relationships such as lip line, smile line, face profile and factors such as phonetics and age, all play a role in the positioning of anterior teeth.

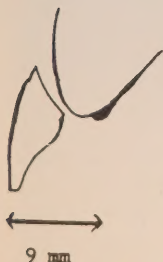


Fig 4

There should be no contact between maxillary and mandibular anterior teeth in centric or any other excursion and the incisors should be set directly over the ridge to prevent adverse tipping stresses. Patients should be warned regarding the loss of incising power and be taught to incise in the cuspid - bicuspid area rather than in the incisor area. They should also be encouraged to break food into smaller pieces before placing it in the mouth to minimize the necessity for incising.

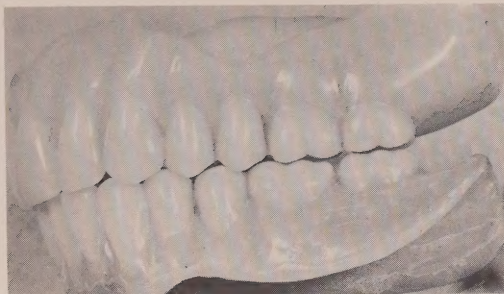


Fig 5 illustrates a case with a large discrepancy between the arches. The lower anteriors are set off the ridge and tilted labially to bring upper and lower anteriors in contact in centric relation. This is a common fault in complete upper and lower dentures.

Fig 5

Fig 6 illustrates the same case set up with monoplane occlusion and no contact anteriorly. The following points should also be noted in this set-up:

- a. buccal cusps not in contact,
- b. reduced number of posterior teeth,
- c. diastema between cuspid and bicuspid to permit proper cusp to fossa relationship,
- d. there would be contact between the anterior teeth in exaggerated protrusive and lateral movements; however, an overbite can be allowed because of the great discrepancy between anterior portions of the maxillary and mandibular ridges. Ideally a monoplane occlusion should provide minimal clearance and no contact of anterior teeth in protrusive and lateral excursions.



Fig 6

Posteriors

1. In order to minimize tipping forces the lower posterior teeth are set directly over the crest of the ridge.
2. The height of the occlusal plane posteriorly is established at a level $1/3$ to $1/2$ the height of the retromolar pad. When making occlusal records, the patient is seated in an upright position with the plane of occlusion established parallel to the floor. The face bow record will then usually position the case on the articulator with the plane of occlusion parallel to the lower member of the articulator. This in effect provides a third plane of reference in mounting the case.
3. In order to avoid placing teeth over the lower molar slope (thus avoiding the rocking chair effect), it may be necessary to reduce the number of posterior teeth. Two bicuspids and one molar or one bicuspid and two molars may be used.
4. Diastemata should be created if required to obtain proper cusp to fossa relationship when positioning maxillary posterior teeth.
5. The buccal-lingual width of posterior teeth may be reduced in order to reduce the food table, thereby lessening stress on a resorbed residual ridge.

Balancing

6. The final balance prior to the insertion of dentures can only be properly

achieved by remounting the processed dentures on an articulator before they are removed from the cast.

The maxillary buccal cusps are ground until the lingual maxillary cusps maintain the only contact in all excursions. The action of the maxillary lingual cusp against the opposing fossa creates a mortar and pestle effect. (See figure 7)

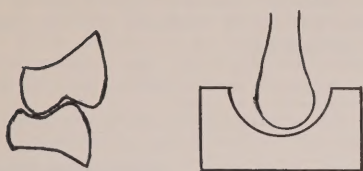


Fig 7

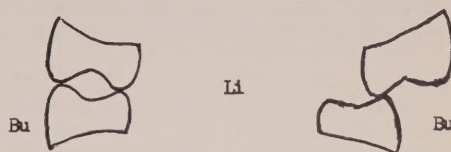


Fig 8

During selective grinding once centric relationship has been developed the lingual cusps of the upper (centric holding cusps) or the central fossa of the lower must not be ground or the centric relation will be destroyed. Grinding will be limited primarily to the inner inclines of the mandibular buccal cusps. While grinding these inclines it must be noted that these inclines are not just ground to the point of uniform balancing contacts but are ground in such a manner that the incisal pin does not leave the flat incisal guidance table.

Polishing

7. When finishing dentures, it is important to guard against excessive polishing of teeth which will destroy the balance attained by selective grinding.

SUMMARY

The objective to be gained by adhering to the suggestions in this article regarding occlusion in complete dentures is the attainment of denture stability which will help to preserve the remaining tissue. In many cases patients can wear dentures which have been made in the conventional fashion for long periods without serious bone loss; however, it is obvious that in a large percentage of cases much of the residual ridge is lost.



Typical lower ridge after twenty years of wearing dentures.

Fig 9

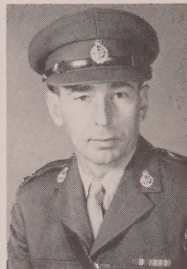
It is very difficult to forecast the amount of bone loss which will occur. Therefore, although the technique described is designed primarily for older denture wearers, there is strong evidence that its employment will also greatly benefit younger patients.

ACKNOWLEDGEMENT

The author recently attended a course in Complete Denture Prosthesis at the Naval Dental School of the National Naval Medical Center in Bethesda and this article is based on ideas and information gained while on course.

TOPICAL ANAESTHESIA

MAJ JW Jolly, CD, DDS



As a result of a recent dental stores investigation, the value of topical anaesthesia in many minor dental procedures has become more apparent to the writer. The method of use and benefits are set out below, as well as information concerning the packaging, stability and patient acceptance of the anaesthetic studied in the investigation.

The topical anaesthetic used was Xylocaine Flavoured Spray, which is packed in a 62.5 gm container providing about 600 metered sprays of 10 mg each. This spray has a long shelf life and retained full potency over the six month test period. The manufacturer claims the shelf life to be three years. Under normal usage, one container should last between six months and one year.

This spray produces topical anaesthesia of good depth and approximately fifteen minutes duration on oral mucous membranes. The spray is applied to the desired area, allowed one to two minutes to produce anaesthesia and then the dental procedure may be carried out.

The apprehensive patient is well known to us all. The use of this spray is beneficial, both physiologically and psychologically for this type of patient when applied prior to injection of local anaesthetic.

In the surgical field, good topical anaesthesia permits the removal of sutures, loose bone spicules and loose residual roots to be accomplished painlessly. When a tooth has fractured during extraction and the exposed pulp is sensitive this spray is very effective as a desensitizing agent, thus allowing the extraction to be completed with a minimum of discomfort to the patient.

In operative dentistry, topical anaesthesia is useful when placing matrix bands subgingivally in unanaesthetized areas or when rubber dam clamps are liable to impinge on the gingival tissues.

In periodontia, application of the topical spray to the gingival sulcus permits deep sub-gingival scaling with a minimum of pain. This anaesthetic also appears

to reduce gingival bleeding to some extent thus improving visibility during deep scaling procedures.

The spray is useful as an analgesic for denture adjustments when sore spots or ulcerations are present. It is particularly beneficial when making adjustments to immediate dentures in the first few days after insertion.

The gagging patient is a source of frustration to the dental operator, particularly during prosthetic and radiographic procedures. Application of this convenient anaesthetic spray to the posterior portion of the palate permits impressions to be made or film packets to be placed with much less discomfort to the patient. The improved prosthetic and radiographic results and the saving in time, materials and frustration are probably the greatest benefits derived from its use.

Most patients, particularly the apprehensive ones, accepted the use of the topical anaesthetic spray well. The majority commented on its effectiveness in reducing the discomfort of the minor procedures detailed above. Some patients commented on the relatively pleasant flavour of the spray.

SUMMARY

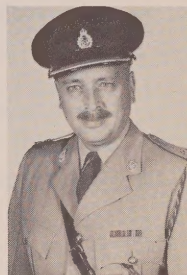
The usefulness of a topical anaesthetic spray in a number of minor dental procedures has been outlined.

The value of topical anaesthesia to the dental operator, in time and materials saved and improved results gained, and to the patient, in lessened discomfort, has been demonstrated.

- - - - -

REIMPLANTATION - A TECHNIQUE FOR DEFERRING THE LOSS OF POSTERIOR TEETH

MAJ AL Kelland, CD, BA Bed, DDS



In a military dental practice there are certain positive indications for re-implantation of teeth that otherwise would be lost. Many, or indeed most of our patients are young, healthy individuals whose reparative powers are at their best. Since this is so, the favorable prognosis of the following technique promises a very rewarding experience both for the dental surgeon and the patient.

General

Advantages of reimplanting posterior teeth

1. Maintains the integrity of the dental arch where prosthetic replacement of a single tooth is not contemplated.
2. Defers the necessity of prosthetic replacement.
3. Satisfies the patient who desires to retain his own teeth as long as possible.
4. Offers the most complete dental care possible for our military personnel.
5. Reduces the dental officer and laboratory technician working time by eliminating the necessity of constructing a fixed bridge replacement.

Indications for reimplantation of posterior teeth

1. Teeth for which conservative endodontic treatment is not feasible because of instrumentation difficulties.
2. Teeth which are chronically abscessed.
3. Teeth for which conservative treatment by root canal and subsequent apicoectomy are not indicated.
4. Teeth where the time required for conservative treatment is not available.

Contra-indications for reimplantation of posterior teeth

1. Acutely abscessed teeth.
2. Teeth which fracture during extraction.
3. Teeth whose roots must be sectioned before extraction.
4. Teeth with advanced periodontal involvement.
5. Uncooperative patients or those not available for post operative treatment.

Technique for Reimplantation

Employ an "Aseptic" Technique

1. All instruments must be sterile.
2. Prepare the gingival crevice and local operating area with a suitable topical antiseptic (metaphen, merthiolate or Zephiran).
3. Give patient 1/150 gr. atropine sulphate one hour before the operation.

Extraction Technique

1. Perform the extraction as atraumatically as possible. It is better to lay a flap and remove a controlled amount of buccal bone than to fracture the crown of the tooth or an excessive amount of buccal plate.
2. Curette the extraction socket free of any debris and place sterile gauze over the wound. Have the patient close on the gauze until the tooth is ready for reimplantation.

Endodontic Treatment

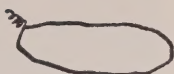
1. The endodontic instrumentation and treatment of the tooth is accomplished in the hand and can be completed from both ends of the tooth, if necessary. It is important to keep the root area from drying out, by wrapping it in a sterile saline soaked sponge.
2. The root tips should be amputated with a disc before filling the canals. This facilitates the reimplantation of the tooth into the socket.
3. The canals are enlarged, sterilized and filled by employing any suitable endodontic technique.
4. The tooth is then placed in a Zephiran Chloride aqueous solution (1:1000) for 15 minutes before replantation into its socket.
5. If difficulty is encountered in reinserting the tooth into its socket, have the patient bite it into place by applying the pressure of his occlusion on a tongue depressor placed on the reimplanted tooth.

Stabilization Procedure (Fig 1)

1. The reimplanted tooth is stabilized by splinting it to the adjacent tooth with 24 gauge ligature wire.
2. Sutures may be inserted through the interdental papillae if necessary for good tissue adaptation.
3. A periodontal pack may be placed around the tooth to keep the gingival crevice free from saliva and food debris until initial healing of the tis-

sue has occurred.

WIRE SPLINT TECHNIQUE



1st wire around three teeth



2nd and 3rd interdental wires

Fig 1

Post Operative Treatment

1. Post operative pain is usually negligible; however, it is always wise to prescribe an analgesic and an antiseptic mouth wash.
2. Antibiotics need not be employed and should be used discriminately.
3. Have the patient return in 24 hours to check on the stability of the wire splint and occlusion.
4. Remove sutures and periodontal pack in approximately five days.
5. Make a weekly check of the wire splint and remove it in four weeks.
6. Extract the tooth if an acute infection should occur.

Prognosis

1. The common result of reimplanted teeth is the resorption of the roots with replacement of the dental tissue by bone.
2. A successful replant can last as long as 20 years.
3. If the replant survives five years in the patient's mouth, it is considered a successful replant.

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THE LAST DAYS OF THE RCDC IN WHITEHORSE

CAPT JJ Erskine, DDS



The history of the Royal Canadian Dental Corps on the Alaska Highway spans the twenty-two year period from April 1954 to July 1, 1968. Colonel (now Brigadier-General) Kearney's article in the January 1965 issue of the RCDC Quarterly covered the period from 1946 until the Northwest Highway System was handed over to the Department of Public Works on April 1, 1964 and this article is concerned with the period from April 1964 to the recent closure of CFS Whitehorse and, with it, No 6 Dental Clinic.

In early 1943 the Northwest Staging Route was established with Whitehorse as a Staging Unit. This route was a joint effort of the United States Army Air Force and the Royal Canadian Air Force to supply the defenders of Alaska, and was used as the ferry route for lend-lease aircraft enroute to Russia. In 1944 Northwest Air Command was formed, part of which was No 5 Staging Unit, later renamed RCAF Station Whitehorse. A lodger unit, No 5 Radio Unit, was the prime employer so consequently in 1966 the station became CFS Whitehorse under command of Canadian Forces Supplementary Radio System.

The staff of No 6 Dental Clinic in the spring of 1964 consisted of Captain GA Johnson, Sergeant RL Thornton and Mrs Olga Johnson. Captain Johnson had the unique experience at this time of helping to found the Yukon Dental Association. There were four charter members and each received a moose hide certificate of registration.

Clinic personnel passed the summer and early fall in much the same manner as their predecessors by hunting, fishing and becoming involved in the community. During this period, the pedo-ortho component of the clinic practice grew, and Sergeant Thornton started night classes at the Vocational School in welding, presumably to help him to solder retainers. Around Christmas time trouble was experienced with the heating pipes and Sergeant Thornton's newly acquired skills were put to use in thawing them out.

The winter of 1965 passed slowly, broken only by a brief flurry of annual madness, the Sourdough Rendezvous. This mid-winter carnival is designed to keep the natives from getting too involved in their own problems and to let them have a little fun during that long cold night they call winter. During this time, Sergeant Thornton, who had taken up painting, managed to sell several of his oils which he had entered in the Rendezvous exhibit.

By June the ice was gone on the lower lakes and a change-over of personnel was imminent. Captain George Johnson and Sergeant Thornton, were posted and only the DO was replaced. Full circle from 1946; back to one DO and an assistant.

Major JI Gordon arrived in August of 1965. The Major's trip up the Highway is noted in his progress report: "...lost one tire, wheel rim, and one headlight with assorted nicks and marks on the windshield." I'm sure that story has a faintly familiar ring to anyone who has driven that gravelled trail.

By October there was snow on the ground and the temperature was averaging twelve below zero. Major Gordon passed the winter working and curling and, right on

time in January, the pipes froze again. Another three days of Sourdough Rendezvous brought a noticeable increase in moustaches on the station. As the Major said: "It is a long, long winter."

Major Gordon was relieved by Captain MB Kricken in June 66 and Captain Kricken's score on the Highway was three flat tires.

With the arrival of Captain Kricken and amid rumors of the station closure the practice in No 6 Clinic settled into its final phase.

In August 1966 the laboratory equipment was returned to QM 11 Coy during a visit by Captain Hunter.



Whitehorse and the
Yukon River.

January of 1967 was noteworthy in that the heating pipes did not freeze, however, the unit went U/S. Ah well. During this winter, Captain Kricken played goal for the Air Force Kodiak hockey team and he must have been a pretty good goalie because they won the Commercial League championship (for the last time).

In May 1967 Colonel GC Evans, Commanding Officer of 11 Dental Unit visited Whitehorse and inspected the facilities. There is no official record of whether or not he caught any fish.

The end of July 1967 saw the final change-over in Dental Officers on the Highway with Captain T Erskine replacing Captain Kricken. On Captain Erskine's maiden fishing trip on Discovery Day, August 17 his only catch was the head of a previously caught and cleaned fish. On the way home he got a rock through his windshield and two flat tires - with only one spare in the trunk. The station CO and the SSupO, who were in convoy with Captain Erskine, tried to comfort him but were laughing so hard they were of little help.

In September Mrs Olga Johnson terminated her long employment to accept a more permanent position with the Territorial Government. This situation was fairly common at this time as the civilians knew the station was closing and were naturally seeking permanent employment elsewhere. We were sorry to see Olga go.

Private Rich North arrived in October to take up duties as DA. Shortly thereafter he attempted his trade test, passed and was promoted to Corporal.

Christmas was heralded by that fine old Whitehorse ritual, the Christmas Tree Hunt. Trees were gathered for wives of men away at Alert and for the various messes and halls. The efforts of the choppers were greatly aided by large jugs of hot "Yukon tea" provided by the Sergeants Mess.

The last New Years Levees were frantic affairs and the new year promised to be one long social event as it was fairly firm now that the station was closing July first.

Colonel GC Evans made his final visit to Whitehorse in January 1968 and in February the Commander of CFSRS confirmed that we would be out of Whitehorse on July 1, 1968.

Spring was an exciting time with a surge of bonspiels and a multitude of farewell parties and dinners. The people of Whitehorse did everything possible to show the servicemen how much their contributions to the community were appreciated and in May a parade was held in Whitehorse to commemorate the departure of the RCAF from the territory.

With all the confusion attending station closure, clinic closure, postings, leave and goodbyes, June passed very quickly. MWO Conkey arrived from Edmonton to remove the units and to enjoy one last look at the Yukon where he had served in 1949. No 6 Clinic was now officially closed.

Thus, a little over twenty-two years after Captain JA Allan arrived aboard DC 3 'Gravel Gertie', the RCDC left the Yukon. There was no ceremony. Captain Erskine merely turned over the building keys and inventory, said a few goodbyes and swung out on the Alaska Highway to join the dusty caravan south.

GOOSE BAY - THE FINAL CHAPTER

ICOL RA Fell, CD, DDS



The Canadian Forces were pulled out of Goose Bay and the Base and its operation was turned over to the Department of Transportation on 1 Aug 67.

In December 66, the Base Commander, Group Captain RFM Walker, called all section heads together and announced that the Base would be turned over to the Department of Transport. Each section was to prepare a phased shut-down program to be incorporated into the base program and so planned that no essential service would be lost to the personnel who would be last to leave. Consideration had also to be given to the crating and shipping of a vast weight of equipment and supplies.

At this time, Dec 66, the clinic had two operating bays with ICOL Fell and CAPT Dippel, and a dental laboratory with CPL Mitrikas. There were three dental assistants, CPL Patterson (RCAF), CPL Russell and CPL Wormington. The technician clinical position had been left vacant when MWO Tapp left in Aug 66.

The first phase of the shut-down was completed on 22 Feb 67 when all dental equipment associated with the third operating bay plus other non-essential clinic equipment was shipped out.

In May 67 arrangements were made with the USAF to provide dental care for a group of RCAF personnel who were to remain until DOT had trained men for Air Traffic Control and the small administrative unit that would remain to support these men. Treatment also had to be arranged for the RAF Detachment. In addition, the RCDC would send up a dental team on periodic visits. This team would provide its own dental supplies and instruments but would be allowed the use of a completely equipped operating bay in the USAF clinic.

In the course of destroying old dental records an unpaid civilian account was discovered in the amount of \$56.00. The patient advised us that she would be unable to pay her debt before our deadline but promised to send the money by mail. We had to accept her word. It was with considerable satisfaction that we found in researching for this report that the bill had been paid. There are some honest people left in the world.

In late July all remaining equipment and personnel were gone. The RCAF Inventory of Building 82 was turned over to DOT and CPL Russell locked the door. LCOL Fell, CPL Russell and CPL Ritchie boarded the outgoing plane on 28 Jul 67. We have heard that DOT will use the building for living quarters.



Above - Goose Bay Dental Clinic 1967

Right - The last of the RCDC - CAPT Dippel, PTE Paquet, CPL Russel, CPL Ritchie, LCOL Fell



Two visiting teams have since returned to the Goose. The first in Dec of 67 consisted of MAJ Gordon and SGT Hill; the second in Jul of 68 consisted of CAPT Berthaume, PTE Olinik and WO DeBlois.

The Dental Clinic at Goose Bay has been the responsibility of 15 Dental Unit since 1951. Commanding Officers have been, in turn, LCOL PR LaSalle, LCOL CW McCrary, COL TL Marsh, LCOL JG Butler, COL RB Jackson and COL CM Cornish.

The following names and dates should be added to those compiled by LCOL JM Smith in his report in the RCDC Quarterly of Apr 66:

- 1961 - SGT T Hussey(second tour)
- 1964 - MWO M Tapp (second tour)
- 1965 - SGT E Borden, CPL R Wormington
- 1966 - LCOL R Fell (second tour), CPL L Russell, CPL W Mitrikas,
SGT M Tremblay, CPL Anderson, SGT D'Avignon (second tour)
- 1967 - CPL Burns, CPL Gapmann, CPL Ritchie, PTE J Paquet

RCAF Assistants - AW Babish, CPL Maklitz, CPL Scarborough,
CPL Patterson

* Editor's Note

Appologies are extended to veterans of service in Goose Bay whose contributions have not been acknowledged. Space limitations and lack of detailed records makes it impossible to adequately describe the part played by many others who have had short tours of duty at "Robert Michelin's Berry Patch".

The RCDC News

SIXTH ANNUAL RCDC GOLF TOURNAMENT

On 20-21 Sep 68 the RCDC School again hosted the annual RCDC Golf Tournament at the Circled Pine Golf Club CFB Borden. A record turnout of 101 eager golfers representing all RCDC units in Canada participated in the two day event. The Officers' Trophy for team play was won by the RCDC School team and various individuals won 23 other prizes.

On the final evening over 120 members of the Corps attended the banquet and presentation of prizes and awards.

Everyone had a wonderful time and the staff members of the RCDC School received many well deserved compliments for a job well done.



Top Left - BGEN BP Kearney presents the RCDC(R) Officer's Trophy for team competition to winning team from the RCDC School.

L to R - CWO Tom Batten, (BGEN Kearney) COL LG Craigie and CPL John Clint.

Top Right - BGEN BP Kearney presents the KM Baird Trophy for tournament low gross for 36 holes to CWO Tom Batten whose score was 164.

Bottom Left - COL Covey presents the GR Covey Trophy for low gross for 18 holes to CAPT DA Devine. His score - 80.

Bottom Right - MAJ Henry Marion presents the prize for tournament low net (147) to BGEN BP Kearney.



Some of the action - SIXTH ANNUAL RCDC TOURNAMENT - 1968

Division News

Visits and Inspections

BGEN BP Kearney and Major Chatwin visited the three Service Colleges in Victoria, Kingston and St Jean, PQ to introduce the preventive dentistry program instituted this year for the Cadets.

Major Chatwin visited the recruit training centres in St Jean and Cornwallis as well as CFB Galetown to introduce the preventive dentistry program instituted this year for new recruits.

ICOL Fletcher travelled to London England in September to attend a cataloguing meeting and then visited the European Bases to review the dental stores procedures.

ICOL Pierce visited the RCDC School prior to the DOTP Graduation ceremonies to interview the cadets.

Postings

SGT Ken Shergold left the Division on posting to the Canadian Air Borne Regiment in Edmonton. He can be certain that he is missed since no replacement was provided.

11 Dent Unit

In Memorium

The many friends of WO2 Bill Powers (retired) will be saddened to learn of his death on 9 Aug 68 in Victoria. The Corps was represented at his funeral by CWO Greco and WO Storms.

Sports

Golf

This Unit was represented by five golfers and one non-golfer at the recent RCDC Annual Golf Tournament and they did not return empty handed. Our total haul of prizes was "one golf ball".

SGT Walker RS won the Tournament low net in the Labour Day Weekend Tournament held at Namaso.

Swimming

CAPT Rosengart contributed to the success of CFS Holberg in capturing second place in the "100-hr swim" which is an annual competition held by radar stations across Canada. He completed the 12 mile maximum allowed per man within the specified time.

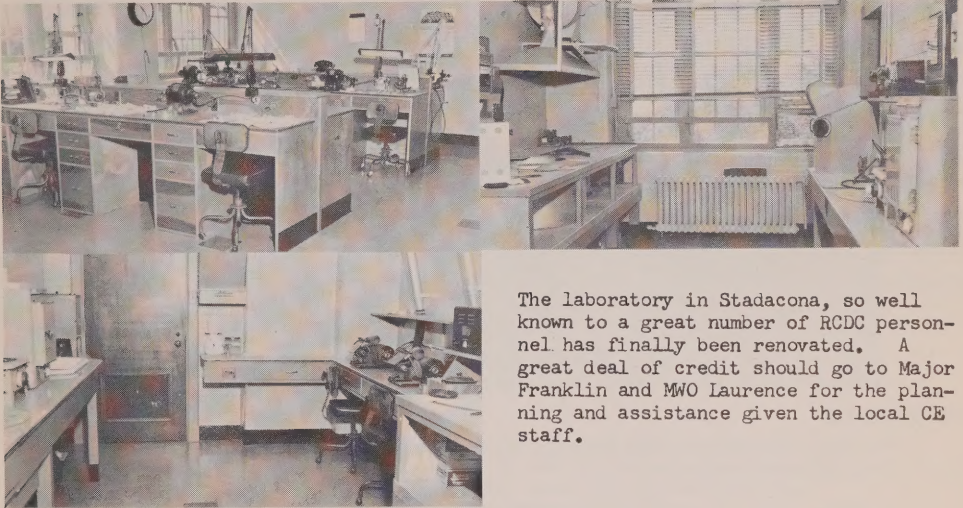
Hunting

With all the hunting and fishing success of personnel throughout the unit, the meat departments of local grocerias should suffer a marked reduction in sales this winter. CAPT Walls and CPL Clifton of Esquimalt claim 35 pounds of salmon taken during a morning's fishing. CAPT Dunnigan and CPL North took time out from a heavy workload at Alsask for goose shooting and SGT Looker of CFB Penhold reports a 12 lb Jack. The most fortunate sportsmen, or at least the best story tellers, are based at Cold Lake, where CWO Daw claims a deer, moose and four grouse. Not to be out-done, CAPT Pankratz during the same month scored a moose, a deer and 6 grouse. However, the laurels go to COL Evans for activities ensuring success in stocking the larder. He recently contributed 64 lbs of King Crab (legs only) to local deep freezers by purchasing them on a recent liaison visit to CFB Comox via Kodiak Alaska.

12 Dent Unit

Accommodation

Central Laboratory CFB Halifax



The laboratory in Stadacona, so well known to a great number of RCDC personnel has finally been renovated. A great deal of credit should go to Major Franklin and MWO Laurence for the planning and assistance given the local CE staff.

Sports

CPL Mason was a member of the Zone 7 Softball Team which competed in the Canadian Forces playdown in Winnipeg.

CAPT Cragg was the runner-up in the Zone 8 tennis tournament held at CFB Greenwood 15-16 Aug 68.

Wings Parade



Major Cobb pins a Radio Navigators Wing on his son LT Thomas R Cobb during graduation ceremonies at the Air Navigation School in Winnipeg.

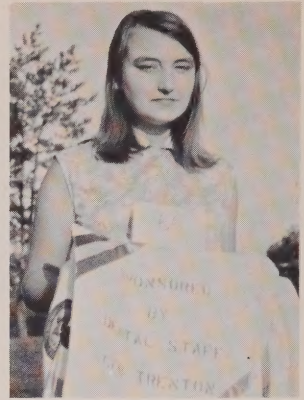
13 Dent Unit

Retirements

WO Kennedy and MWO Blackmore have retired from the service after long and faithful service. Best wishes are extended to Tiny at University of Western Ontario and Vince in British Columbia.

Special Event

Miss Catherine Kidd, daughter of MWO "Mickey" Kidd of the dental detachment at CFB Trenton, entered a 30 mile walkathon sponsored by the Belleville Kiwanis Club to raise money for the purchase of an intensive heart care unit for the Belleville General Hospital. No 13 Dental Unit personnel at Trenton pledged \$5.00 per mile and Catherine completing the walk to earn \$150.00 for the Kiwanis.



14 Dent Unit

Accommodation

The unit HQ, clinic, and central laboratory are now comfortably settled in their newly acquired quarters.



Top Left - WO Strubb at work in the Dental Stores

Bottom Left - WO Stewart in the equipment repair station

Top Right - MWO Mann, SGT Roy and CPL Cormie in the bright new Central Laboratory

Bottom Right - Miss Morken preparing one of the operating rooms



CPL Dale was presented with a plaque by LCOL Butcher on behalf of the Commandant of the Combat Arms School at CFB Borden for standing second in a recent Jr NCO course. Major Begin adds his congratulations.

15 Dent Unit

Retirements

Major Gaudet, MWO Arsenault and SGT Hughes were honoured on completion of their service in the Canadian Forces. Major Tom Gaudet is opening a practice in Weymouth, NS. Andy Arsenault will be residing in Shediac, NB and John Hughes in London, Ontario.

Sports

CAPT JLPA Berthiaume has been appointed assistant coach with the CMR Football Team.

Major JFA Marciel won the CFB Valcartier Golf Club Championship and was again a member of the winning team in the Valcartier Zone 6 Golf Championship.

1 Dent Unit

Retirement

A party was held at CFB Rockcliffe on 28 August to bid farewell to SGT "Red" Arnsby who is retiring after 20 years service to take a position at the Faculty of Dentistry, University of Toronto.

Golf

WO Torrens won a prize as the best woman golfer at the RCDC Tournament. PTE Lamontagne won 1st low gross "B" Flight. SGT Hill had the longest drive.

4 Fd Dent Coy

Conferences and Meetings

LCOL Windsor, CAPT Swanzey and CAPT Wood attended the USAREUR Dental Training Conference in Garmisch Germany from 25 to 27 Sep 68.

Major Deyette and CAPT Depledge attended the USAFE Dental Training Conference in Wiesbaden Germany from 11 to 13 Sep 68.

Hospital

Best wishes for a speedy recovery are extended to SGT Schuh who received extensive injuries in a vehicle accident.

Sports

LCOL Windsor has been appointed President of CLFE Curling Club.

35 Fd Dent Unit

Conferences and Meetings

LCOL Protheroe, Majors Cyrenne and MacDonald, and Captains Adams, Boston, Cooper, Fortier, MacKenzie, and Stansfield attended the USAREUR Dental Training conference in Garmisch from 25 to 27 September. LCOL Protheroe presented a paper on Auxiliary Dental Personnel in the RCDC which was well received.

LCOL Protheroe attended the USAFE Dental Training Conference in Wiesbaden Germany from 10 to 13 September.

Sports

LCOL Protheroe and Major Mason participated in the Air Div HQ and 1 Wing Golf Tournament on September 18 and were prize winners. No report was received of what the prizes were awarded for.

Leave

The members of the unit visited many countries of Europe on leave during the summer and returned home full of enthusiasm for the marvellous sights they saw. The most recent attraction has been the Oktoberfest in Munich and "Dirndl" and "Leder Hosen" are now the costumes of choice at local parties.

Dent Det Cyprus

Rotation

CAPT Nadeau, SGT Forsyth and CPL Dannyluck have completed their tour in Cyprus with the PPCLI and are being replaced by CAPT Dion, CPL Stanaboug and CPL Bernier who will serve with the 3rd Battalion R22er.

Entertainment

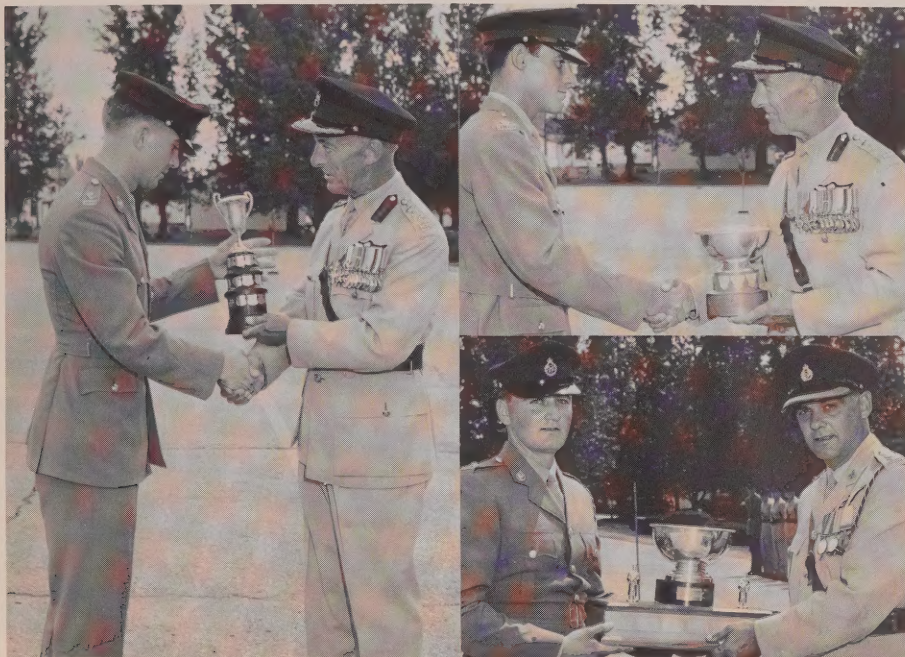
On 7 Sep 68, local talent produced a brilliant show "Farewell to CML". CPL Dannyluck and his group known as the "T Birds" were the star performers.

The RCDC School

DENTAL OFFICER TRAINING PLAN 1968

Graduation Parade

Practical Phase DOTP training was conducted at CFB Borden during the summer culminating in a marching out parade and graduation ceremonies at the RCDC School on 8 Aug 68. BGEN BP Kearney inspected the cadets and took the salute.



Left - BGEN BP Kearney presents Third Phase Honour Cadet Trophy to 2LT JC Steel (University of Alberta).

Top Right - COL LG Craigie presents Second Phase Honour Cadet Trophy to 2LT FVR Jackson (Dalhousie University).

Bottom Right - LCOL AG Andrews presents the Chief Instructor's Trophy to 2LT R Gish (University of Alberta).

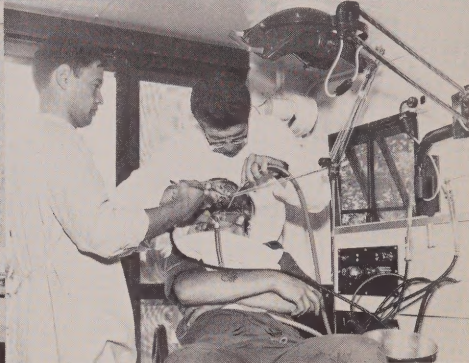
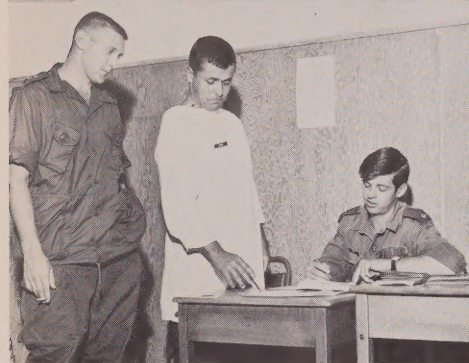
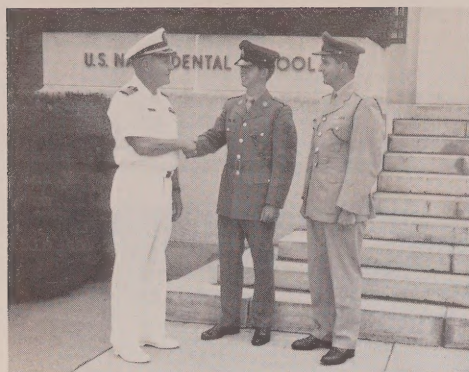
O/Cdt JJJ Lemieux (University of Montreal) was named Honour Cadet, First Practical Phase.

2LT JM Cherun (Dalhousie University) was presented the Third Phase Honour Cadet Runner-up Award.

2LT FR Margetts (University of Alberta) was presented the Second Phase Runner-up Award.

Field Exercise - 3rd Phase DOTP 22-26 Jul 68

A five day field exercise was conducted at Meaford, Ontario, utilizing three mobile dental vans and a lecture room with six operating areas. The candidates worked in pairs and were rotated through all operating positions to gain experience in using field equipment.



Top Left - Third Phase DOTP visit US Naval Dental School

CAPT WC Wohlfarth Jr - Commanding Officer US Naval Dental School, 2LT DB Smith - Third Phase DOTP and MAJ JN Wright RCDC - Tour Conducting Officer.

Top Right - Third Phase DOTP candidates and instructors on a field exercise at Meaford, Ont.

Bottom Left - Clinic manager 2LT DB Smith (U of Toronto) allots patient to 2LT RD Carver (McGill) while CAPT NS Misura looks on.

Bottom Right - 2LT AJ Burns (U of Toronto) treats a patient in a dental van with the assistance of 2LT JSHL Duchesne (U of Montreal).

Familiarization Tour of Military Installations,
Washington, D.C., USA (27 Jul-3 Aug 68)

One of the highlights of Phase 3 DOTP this summer was the Washington tour. The tour began with departure from Base Borden via aircraft to Andrews Airforce Base on 27 Jul 68, under the supervision of the Tour Conducting Officer, Major Jim Wright.

The one-week tour included visits to: Dental activities - Walter Reed Army Medical Center, Institute of Dental Research - National Institutes of Health, and Naval Dental School - National Naval Medical Center. Also, visits were arranged to: The Whitehouse, The Smithsonian Institute, and the US Marine Barracks.

A series of professional lectures from staff instructors at the Naval Dental

School and Walter Reed Dental Activities were much appreciated and proved invaluable to the hungry minds of our 3rd Phase DOTP.

Among the dignitaries the candidates met were Major General Robert B Shira, Assistant Surgeon General and Chief of US Army Dental Activities and Brig Gen James S Pegg - Director Dental Activities (WRAMC).

At 0900 3 Aug 68, the group departed from Andrews Airforce Base for CFB Borden, very appreciative of all they had seen and heard from the Washington tour. This was certainly an ideal way for these young dental officers to finish their nine-week summer program, and they took fond memories back with them to their respective universities.

Officers Clinical Course (Oral Surgery) 5 Sep-20 Sep

A two-week plus course in Oral Surgery was held at the RCDC School under the skillful direction of LCOL AG Andrews. The six candidates included LCOL WW Anglin (13 Dental Unit), Major NW Brogan (11 Dental Unit), CAPT GS Zwicker (14 Dental Unit), CAPT DC Morgan (13 Dental Unit), CAPT JM Steadman (14 Dental Unit), CAPT JL McNeil (11 Dental Unit). The course provided members with an opportunity to perform exodontia and minor oral surgery with specialized training in clinical procedures.

Retirement

A farewell party was held at the RCDC School to wish "bon voyage" to some of the staff retiring from the Corps. They included Majors "Bill" Murray, "Bob" Bryant, CWO "Tom" Batten, and SGT "Ken" Rothwell. Everyone in the RCDC is sorry to see them go, and wish them the best in their future endeavours.

Dental Liaison Officer Visits RCDC School

Colonel "Bill" Wakefield from the Dental School at San Antonio, Texas, visited the RCDC School as a Liaison Officer of the US Dental Corps. An exchange of ideas on training and preventive dentistry was afforded by his visit. COL Wakefield stayed for the RCDC golf tournament on 20-21 Sep; and was presented with an RCDC plaque by the School Commandant, COL LG Craigie before his departure.

1 Dent Eqpt Dep

The fishermen of the unit report only fair to good results in their search for pickerel.

The depot team entered in the RCDC Golf Tournament unfortunately had to withdraw thereby giving second and third place teams a chance at the top money.

Professional Training

University of Michigan, Ann Arbor, Michigan, USA

MAJ	CL	Gullekson	-	Crown and Bridge Prosthesis	-	11-22 Nov 68
CAPT	JAA	Boucher	-	Guiding Occlusal Development	-	4-8 Nov 68

Walter Reed Army Medical Centre, Washington, DC, USA

MAJ	IA	Reynolds	-	Periodontics 2nd (final) yr of Residency	-	Oct 68-Aug 69
CAPT	IC	Wambara	-	Preventive Dentistry	-	14-18 Oct 68

US Naval Dental School Bethesda, Maryland, USA

CAPT JAAL Carrier	- Removable Partial Dentures	- 28 Oct- 1 Nov 68
CAPT DNH Charles	- Complete Dentures	- 30 Sep- 4 Oct 68
MAJ JOL Bourget	- Fixed Partial Dentures	- 23 Sep- 8 Nov 68

Royal Canadian Dental Corp School, CFB Borden

Officers Clinical Course Oral Surgery 4-19 Sep 68

LCOL WW Anglin; MAJ HW Brogan; CAPTs GS Zwicker, DC Morgan, JM Steadman, JL McNeill

Fixed Partial Dentures 3-18 Oct 68

CAPTs EI Gerard, DG Wilson, JW Bergerman, DA Humphreys, JIPA Berthiaume, JIAR Bourcier

Training

Royal Canadian Dental Corp School, CFB Borden

Dental Assistant Pay Level 3 - 7 Oct-6 Dec 68

CPL(AF) Doucet JC, CPL(A) Griffiths JW, CPL(A) Kallman LJ, CPL(A) Langford DT, CPL(AF) MacAulay DA; PTE(AF) Christal DR, PTE(AF)(W) Dumont MML, PTE(A) Hopkins JD

Dental Laboratory Technician Pay Level 5 - 3 Sep-25 Oct 68

CPLs Allen ML, Ayerst HE, Buxton WD, Hope NJ, Gapman HKK, Larouche JA, Peck AH, Todd RE

Dental Laboratory Technician Pay Level 6 - 4 Oct-20 Dec 68

SGTs Hardy DH, O'Mara TR, Pink A, Roy JRR; CPL Mandrusiak OW

No 1 Dental Equipment Depot - CFB Petawawa

Dental Equipment Maintenance Technician Pay Level 5 - 3 Sep-20 Dec 68

CPLs Boulianne JAL, Gratton JRY, Harkin PE, Longford MD, Violette JLA

Canadian Forces Staff School

CAPT FH Harreman

Canadian Forces School of Intelligence and Security

Sr NCO course - 17 Oct-14 Nov 68

CPLs Alkenbrack AM, Atherton JA, Kalmet M, Mitrikas ZMI, Olinik MG, White JM

Sr NCO course - 18 Nov-13 Dec 68

CPLs Challenger GN, Heather CSB, McDonald GK, Ritchie JR, Schultz EF, Jack A, Hatcher LR

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

LT RD Townshend; CPLs Denis MJ, Griffiths JW, Jenereaux WK, CPL(AF) MacAulay DA, CPL(AF)(W) Price EI; PTE(AF) Christal DR, PTE(N) Hebert RL, PTE(N) Nesrallah JW, Shirley E MacDonald, Miss Gail Thorp, Mrs E Powell, Mrs Macklin; CPL(AF) JC Doucet; Mrs D'Amour

Promotions

To MAJ - AN Swanzey
To CAPT - EM Lobb
To OC - CPL KV Hansen - DOTP University of Manitoba
To SGT - Highfield NL
To CPL - Bernier JG, Brophy GL, Craig MJ, Dale JE, George HEM

Retirements and Releases

MAJ RJ Bryant, MAJ TC Gaudet, MAJ WH Murray, MAJ JLL Girard, MAJ AT Hinch; CAPT JG Thompson; CWO TL Batten; MWO Arsenault AJ, MWO Blackmore VO, MWO Kennedy FM; SGT Arnsby WJ, SGT Hughes AJ, SGT Rothwell KS; CPL Deveau CW, CPL Hansen KV, CPL Thompson RE; PTE(AF)(W) Verret PA; Mr R Avon, Mr R Mills; LCPL Arklie HE; SGT Heard JF; PTE(AF)(W) Lemoine BA; Mrs I Pollock, Mrs F Bussieres, Mrs MH Despres

Vital Statistics

Marriages

PTE(A) Cudmore WG to Miss Darlene Marcia Dowhaniuk, PTE(A) Lambert LA to Miss Anita-Mayer Andrews, PTE(AF)(W) Cook MA to CPL Chapman AW, PTE(AF)(W) Graham RA to RJ Verret; CPL(A) Bosch P to Miss Margaret Caughlin; PTE(AF)(W) Brayton J E to CPL RH Zarudzki, PTE(A) Cloutier JRA to Miss Marie Jeannette Regine

Births

Daughter - CAPT & Mrs JFD Cormier, CAPT & Mrs JW Bergerman, CAPT & Mrs RP Meunier, CAPT & Mrs JD McCallum, CAPT & Mrs V Rausch; CPL & Mrs EJ Schultz, CPL & Mrs JA Larouche

Son - CAPT & Mrs DG Jones, CAPT & Mrs DNH Charles, CAPT & Mrs DE Gibbs; SGT & Mrs B Vandervaart (adopted); CPL & Mrs PJ Armstrong

Bereavement

All members of the Corps extend their deepest sympathy to SGT Dowell of No 12 Dental Unit and CPL Larouche of No 15 Dental Unit on the recent loss of their wives.

Notice

Remember the 7th annual RCDC Bonspiel to be held in Camp Borden 21-22 Feb 69.

- - - - -

With this edition readers will note a change in the Editorial Board for the RCDC Quarterly. LCOL LA Richardson replaces LCOL G MacDougall.

The Editorial Board wishes to express the appreciation of all readers of the RCDC Quarterly to LCOL G MacDougall for his editorial work during the last three years.

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Quarterly



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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney, MBE, CD, QHDS

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

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Cover Photograph

Churchill in Winter

LETS LOOK AT OURSELVES

To provide an effective military dental service we must be constantly aware of the public image of dentistry which we create. The simplest and most effective method of building this image is the personal relationship between dentist and patient.

The basis of good human relations is found in the Golden Rule, "Do unto others as you would have them do unto you", and this is the ideal that should be our aim. But are we attaining this lofty ideal? Can you answer these questions in the affirmative with respect to all members of the clinic staff?

- Do they talk prevention and dental hygiene with patients?
- Do they keep the premises, the uniforms and equipment spotlessly clean?
- Do they have a friendly tone while answering the phone?
- Are they considerate of the convenience of the patient in making appointments?
- Are they congenial and sympathetic with patients in the office?
- Are they diplomatic while discussing dependants fees and making appointments?
- Do they reflect a sense of pride in their position?

And how are your dentist-to-patient relationships?

- Are you courteous and tolerant with your patients?
- Do you explain the proposed treatment plan?
- Do you always discuss treatment plans with parents before proceeding with work on children?
- Do you provide adequate post-operative care and handle emergency calls?
- Do you refrain from criticizing the services of your confreres?
- Do you refrain from guaranteeing your services?

You should be able to answer affirmatively to each of the above questions.

Why not review your clinic procedures now and see if there is room for improvement. It will benefit your practice and will enhance the image of the Corps in the eyes of the Service.

Editorial Note:

Our appreciation is extended to the Alberta Dental Association for providing many of these suggestions.

A LETTER TO THE EDITOR

The RCDC Quarterly devotes this section to comments by readers on topics of current interest to Service Dentistry. The Editorial Board reserves the right to edit all communications to fit available space. Printed communications do not necessarily reflect the opinion or official policy of the Royal Canadian Dental Corps.

Occlusion in Complete Dentures

To the Editor:

I would like to comment on Major GDV Dippel's article "Comments on Occlusion in the Construction of Complete Dentures" published in a recent edition of the RCDC Quarterly (Vol. 9 No. 3).

Under his comments on monoplane occlusion, that in many instances the last molar encroaches upon the "Lower Molar Slope" is most valid. Is it not the number of teeth; ie, the last tooth being over the incline of the residual ridge, that causes the lower denture to shift anteriorly? Would this not occur regardless of the style of "occlusion"? Along this line, Fig 1 is misleading.

In his discussion on developing monoplane occlusion, does he feel that protrusive balance is not necessary or how does he feel about tipping of the dentures by the resulting anterior contact of monoplane occlusion in protrusive?

In relating to cusp height by averaging the difference between incisal and condylar readings, I assume that his face bow records always place the maxillary cast and occluding rim in the precise center of the instrument; that is, both vertically and antero-posteriorly.

Does the face-bow really position the casts on an articulator with the occlusal plane parallel to the base of the instrument? Is not a face bow record only relating the relationship of the maxilla to the condyles regardless of head position! In fact - we place the casts in the articulator with the occlusal plane related to incisal guide pin or the base of the instrument, as a convenience to using the instrument.

I would disagree strongly with the statement "The final balance prior to insertion of the dentures can only be, etc." What feelings does the author have as to "patient remounts"?

JE Ryan, DDS, MSc
Chairman
Division of Removable Prosthodontics
Faculty of Dentistry
University of Western Ontario

REPLY BY EDITORIAL BOARD

Dear Doctor Ryan:

The Editorial Board considers it a compliment that you have sufficient interest in this publication to expend the time and effort to comment on an article and thus stimulate further interest and thought.

Your comments with regard to the lower molar slope are valid and the Editorial Board was perhaps remiss in not requesting closer correlation of figure 1 to the text of the article.

Your observation with regard to protrusive balance is not entirely understood as Major Dippel specified that protrusive and face bow records and a laboratory remount are required and that there should be no contact of anterior teeth in centric

or any excursion.

The Editorial Board agrees with your comment on cusp height but the author has qualified his earlier statement in the final sentence with regard to cusp height in that he acknowledges that the lateral cusp rise will be greater as it approaches the condyle and less as it approaches the incisal guidance table.

Your comment with regard to positioning the casts on the articulator could easily be incorporated into the second paragraph of the discussion of posterior teeth. It would appear that the problem here is that this matter was dealt with too briefly. There is no doubt what record the face bow makes but many readers may overlook the fact that it is also an instrument that places the maxillary cast on the articulator in a predetermined relation to the condylar element and an elective vertical position.

Your observation about final balance is well taken and it is agreed that a patient remount procedure is necessary.

This reply on behalf of the author is made to stimulate discussion and is independent of comments that the author may make.

AUTHOR'S REPLY

I recently received a copy of some correspondence between you and Dr Ryan of the University of Western Ontario.

Thank you very much for your comments in respect to my article. I must admit that on several points the article tended to be a little misleading.

Regarding Dr Ryan's comments: "Is it not the number of teeth, ie, the last tooth being over the incline of the residual ridge, that causes the lower denture to shift anteriorly? Would this not occur regardless of the style of occlusion?"

I agree with Dr Ryan that removal of the last tooth will reduce the anterior shifting regardless of the occlusion used; however, I feel that it is the exaggerated "Curve of Spee" that causes this anterior shifting of the denture. This exaggerated "Curve" is eliminated by removal of the last molar when it encroaches on the lower molar slope thus eliminating the "Ski Slope effect" which is often seen when fourteen denture teeth are indiscriminately added to a denture without thought as to the space available.

Your comments regarding protrusive balance explain my feelings exactly. May I add further that the patient must be instructed that he will not be able to incise food but will have to resort to using a knife and fork to break food into smaller pieces. In the cases that I have used this technique the patients have been problem "wearers" and usually did not wear their lower dentures. In most cases there was little mandibular ridge left and a great discrepancy existed between the mandibular and maxillary ridges, so that there was little incisive power to begin with and no great hardship resulted when the anterior teeth were left out of contact. I feel that protrusive balance must be attained in the molars even though there is no contact anteriorly. The anterior slopes of the mandibular cusps must be ground to compensate for the degree of condylar inclination.

Regarding cusp height I attempted to describe a method of selecting the closest stock tooth for the case, however, regarding Dr Ryan's question on the position of the casts in the articulator and cusp height, I think you described this very well and in sufficient detail.

Finally, Dr Ryan's criticism regarding my not advocating patient remounts is simply a misunderstanding. The article was written "The final balance prior to insertion...." Perhaps the article should have read "The balance prior to insertion.." The word "final" does not mean that no further balancing will be necessary. In an earlier draft I had included a paragraph regarding patient remounts and the fabrica-

tion of a mounting jig to maintain the face bow record, however, this was later deleted to reduce the size of article.

Thank you very much again for your support of this article and if you do pass on some of my comments to Dr Ryan please tell him that I appreciate his keen interest and I feel honoured that he took the trouble to write you his comments.

Major GDV Dippel, DDS
No 15 Dental Clinic
CFB Trenton

IS DETECTION ENOUGH?

Captain HW Wilford, DDS



The Dental Profession is very concerned with the detection of oral cancer and other destructive lesions of the mouth. The follow-up procedures for these lesions however, are often a neglected aspect of dental treatment.

The following case report stresses the importance and demonstrates the need for thorough follow-up care after detection of an oral malignancy.

Case Report

The patient, a healthy 45 year old white man, presented himself for a dental examination to record his oral condition on release from the Canadian Forces. The examination revealed a soft tissue lesion in the midline of the lower lip. The patient indicated that the lesion had been present for ten to twenty years during which time the lip had periodically split and healed. He had been informed that it was possibly a concentration of granulation tissue, but the current size, hardness and induration of the lesion indicated that a biopsy should be performed involving the total removal of the lesion. There was no palpable lymphadenopathy.

The following day the patient reported to Captain D Jones at the Dental Clinic, Canadian Forces Base Shilo for biopsy. It was apparent that excisional biopsy would involve the exterior portion of the lip so the patient was referred to an oral surgeon at Deer Lodge Hospital in Winnipeg, where adequate equipment and techniques were available. The specialist performed a biopsy one week later and informed the patient that he would be contacted if further treatment was necessary. The pathologist's report revealed that the lesion was an epidermoid carcinoma. The dental officer contacted Deer Lodge Hospital two weeks later to learn of the patient's status, but was informed that the Hospital was unable to contact the patient to arrange complete removal of the lesion. The patient's address on release obtained from CFB Shilo, was a small town in Manitoba but the town postmaster stated that the person was not registered with the post office nor did the telephone office have the patient's name in new listings for the area.

Subsequent inquiries at CFB Shilo orderly room revealed by hear-say knowledge that the patient might be at a scout camp at Clear Lake, Manitoba. The RCMP were asked by CAPT Wilford to locate the patient if possible. The police expressed little hope of finding the patient among the hundreds of campsites in the area. Two days

later the patient, still unaware of the biopsy results, was located and instructed to contact the dental clinic in Winnipeg.

The Commanding Officer of 14 Dental Unit, immediately arranged a surgical appointment for the patient and the lesion was removed with minimal disfigurement to the patient's face.

The patient is now undergoing radiation treatment at the Manitoba Cancer Clinic but indications are that the surgery was a success.

Summary

This report points out the need for follow-up action to ensure the treatment is completed. In this case a great deal of tracing was necessary to locate the patient, but had this not been done, the patient would likely remain unaware of his condition and the surgery might have been deferred too long.

* Editor's Note

The following is in part a commendation by DGDS in regard to this case.

"The example set by CAPTs Wilford and Jones in the early detection of cancer and the measures instituted for its treatment provide a great source of pride and gratification for all of us. Their actions have quite possibly extended the life expectancy of this patient and at least spared him considerable disfigurement."

THE RCDC IN FORT CHURCHILL - OVER AND OUT

Captain KPH Buchholz, CD, DMD



Several articles on this northern outpost have appeared in the Royal Canadian Dental Corps Quarterly, including a very interesting historic review by LCOL LR Pierce, which covered activities of the dental clinic to 1965.

Major HK Meisner took over the now one-operator clinic in 1964 with CPL N Cable and Mrs Clark. CPL Cable was relieved in 1965 by CPL E Russell. Although most of the military personnel had left the area by 1964, 150 officers and men of the RCN and their dependants remained in Fort Churchill. The combined populations of Churchill and Fort Churchill did not decrease when the camp was turned over to the Department of Public Works in 1964, since many civilian agencies increased their staffs and new departments had moved in. The dental officer was the only dentist in the community.

The Province of Manitoba took over the hospital buildings in 1964 and formed the complex into Hospital District No 37. The dental clinic was an integral part of the hospital and on many occasions patients were treated under general anesthetic. Responsibility for the dental clinic at this time proved to be a bit confusing. The hospital authorities thought it belonged to them, as they had taken over the whole complex. The maintenance of equipment, provision of supplies and administration were done by No 14 Dental Company, while building maintenance was provided by the Depart-

ment of Public Works and CFS Churchill provided communications and transportation.

Major Meisner said "good-bye" to Fort Churchill in 1966 and Mrs Clark was replaced by Miss Yvonne Beattie.

Captain Buchholz arrived shortly after Major Meisner's departure and was welcomed to Churchill by CPL Bussell. It was like coming home - only a short four years ago he had left Churchill. But what a change! Churchill townsite was easy to recognize even though some of the old buildings were gone and a few new ones were evident. Two piers had been added to the harbour, a new Legion Building had been erected, a new Mission Hall housing a museum, and a modern school were under construction. Churchill's two hotels, the "Hudson" and the "Churchill" were still the same as was the Hudson Bay Store. The "S-M" however, was enlarged and newly renovated.

The only road to Camp was in fair condition and busy as ever. The military site, now CFS Churchill looked the same, so did Akudlik, the Eskimo village, previously known as Camp 20. The gate into the camp was gone, and the Provost shack on the left was now occupied by the RCMP. The arena, hospital and administration building were still the same, except that more shingles were missing from the buildings. Fort Churchill's only store, the "Commissary", had become a Hudson Bay Store. The Officers' Mess had become the Aurora Club, and the Sergeants' Mess was now called the Borealis Club, while the Rank and File Lounge had become the Youth Club.

The former Defence Research Northern Laboratory was now jointly operated by Pan American Air Lines, National Research Council and Churchill Research Range. It was a busy and humming place with scientists from all over the world using the enlarged and modernized range facilities.

Several buildings had been converted into dormitories for Eskimo students of the Vocational Training Center. CVC (Churchill Vocational Center) has training facilities for about 200 students. The Eskimo ladies learn to cook white man's style, are trained in home economics, typing and nursing. The young men are taught welding, equipment repair, woodwork, cabinet making and house building.

Dental treatment was also provided for the students and this proved to be very interesting. Many Eskimos were very tooth conscious and had beautiful teeth with very little decay, but almost all of them had some orthodontic problems. In contrast others were indifferent, loved sweets and usually had rampant caries.

Many Indians from "down the line", about 200 miles along the CNR tracks also came in for emergency treatment. Camp 10 had been relocated next to Akudlik, on the road to Goose Creek, where the government had built new homes for the Indians and this too added to the clinic work load. Train days held many surprises when patients from the Kettle Rapids construction site came for emergency treatment. It was a very busy dental practice.

LCOL W Anglin CO of No 14 Dental Coy and his wife visited Churchill in 1966. It was a short visit and the weather was not very pleasant. MWO R Stewart spent a few days in the clinic to perform needed maintenance to the equipment. As ever, the Christmas season was a busy and long social event, especially since it heralded Centennial Year.

1967; Centennial Year kept everyone busy with fund raising for community projects. CAPT Buchholz took annual leave and was replaced by CAPT F Harreman.

LCOL W Anglin and LT R Bowness were visitors in the spring, unfortunately too early for fishing, but every visit was a welcome break in the otherwise routine schedule.

Rumours that the Naval Radio Station might close caused a rush of people seeking dental treatment since everyone thought the area would be left without dental

service. The unfortunate illness of CPL Bussell compounded the problem but the very efficient and devoted service of Miss Yvonne Beattie kept the clinic going. The arrival of SGT E Knoll was a very much appreciated relief.

The arrival of summer and the ice break-up brought a new season and ships from all parts of the world came to load grain. Mosquitoes and black flies also came to make the short summer miserable. The fishing was good but not easy. Every fish was hard earned from the battle with insects and the treacherous waters of the Churchill River. CAPT D Brown came to take charge while CAPT Buchholz was on leave and during Miss Beattie's holidays, Mrs C Colleaux came to have a taste of northern hospitality.

The arrival of Dr M O'Neil the dentist with the Department of National Health and Welfare, in October 1967, was a welcome event.

As Centennial Year drew to an end, the question - when is CFS Churchill closing? - became more acute. Final word came in April 1968, which meant closure of the Dental Clinic.

With the arrival of LCOL Anglin and CAPT H Doyle on their final visit 15 May 68, No 8 Dental Clinic was about to phase out. For the next two days, the inventory was checked and all equipment turned over to Department of Public Works. The not very impressive and informal sign-over ended a period of service to the community, and with the departure of CAPT Buchholz, CPL Bussell's release to stay in Fort Churchill and Miss Beattie's posting to Winnipeg, No 8 Dental Clinic ceased operation.

It was with regret and a heavy heart that the last RCDC personnel in Churchill said "Good-bye" to so many friends and to the really true northern hospitality where weather conditions and geography bring people closer together.

PINLEDGE RETAINER

Major CL Gullekson, DDS



The aim of this paper is to present the pinledge technique which will probably be used to a much greater degree in the future. Thoughts, suggestions and techniques presented in the article have been gathered from various dental text-books and journals, but mainly from information gained while on course in Ann Arbor, Michigan.^{1,2,3,4}

Advantages

1. In anterior fixed bridges, stability and esthetics must be given equal consideration. The pinledge when compared with conventional retainers, excels in both.
 - a. Esthetically it allows for unblemished labial enamel.
 - b. It requires the least cutting of tooth structure of any anterior retainer.
 - c. Retention, using present techniques which allow for deeper more strategically placed pinholes, exceeds that of more extensive retainers.
 - d. Less chair-time is involved in its construction.
 - e. The pinledge lends itself well to indirect techniques.

Indications

1. In the construction of maxillary and mandibular anterior replacements, the

pinledge can be used singly or in multiple splinted abutments.

2. Pinledge retainers are best suited for anterior teeth having some bulk in the incisal third, but can be placed on thin teeth if the occlusion is favorable.

3. Mouths of low caries index provide the most ideal cases.

Preparation

1. Pinledge preparation is a delicate operation which must be planned using surveyed diagnostic casts and bite-wing radiographs.

2. For retention, pinholes must be of sufficient depth ($2\frac{1}{2}$ - 3 mm) and be positioned so that the pulp is not endangered.

3. Most steps are best accomplished at moderate speeds using a variety of stones and burs.

4. Preparations may be uni-lateral or bi-lateral, ie: involving both mesial and distal surfaces, or a single proximal surface.

Procedure

Uni-lateral on a maxillary central incisor with the mesial surface adjacent to an edentulous space.

1. Proximal Surface (figure 1 and figure 2)

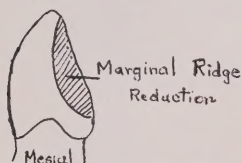


figure 1

- a. Using diamond discs or stones reduce the proximal surface at an angle of 45° to the lingual surface from a point midway on the cingulum up to, but not including, the incisal angle.
- b. This reduction includes the contact area and reaches the labial surface at this point only.
- c. Reduction must be compatible with the path of insertion.
- d. It is not always necessary to go through the enamel, but one must provide for sufficient bulk of gold on the retainer.

2. Lingual Surface (figure 2)

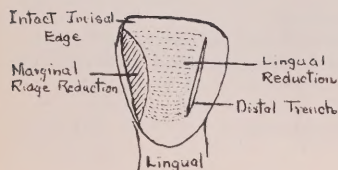


figure 2

- a. Using a knife edge wheel define the distal boundary of the preparation by trenching to a depth of from 0.5 to 0.8 mm extending to and frequently on the remaining marginal ridge.
- b. Remain clear of the incisal edge.
- c. Reduce the lingual surface uniformly to the predetermined depth using a diamond wheel or pear shaped stone.
- d. Check clearance using one thickness of green sheet wax. If the bite is open a lesser reduction is required.

3. Ledges (figure 3)

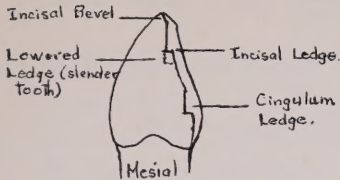


Figure 3

- a. Prepare incisal and cingulum ledges of at least 1 mm width to cross all of the outlined lingual surface using high speed and No 57 carbide burs plus small diamond cylindrical stones. The position of the incisal edge will vary depending on the tooth thickness. The cingulum ledge is placed at the crest of the cingulum.
- b. On the central and lateral incisors both ledges are made perpendicular to the long axis and the pulpal wall and parallel to the path of insertion.
- c. On the cuspid the incisal ledge is made to conform to the outline of incisal edge. (See figure 5)

4. Indentations (or Recesses) (figure 4)

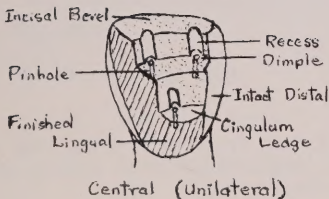


figure 4

- a. Using a high speed No 57 carbide bur cut recesses to a depth of one half bur diameter and parallel to path of insertion.
- b. Locate the incisal recesses just inside the marginal ridges between dentino-enamel junctions and the pulpal horns.
- c. Locate a single cingulum recess slightly off center toward the edentulous space. (Two cingulum recesses may be used placed 2 mm apart.)

5. Pinholes

- a. Create dimples just through the enamel, centered in the recesses, using a high speed No $\frac{1}{2}$ round bur.
- b. Pinholes whenever possible are placed parallel to the long axis of the tooth for pulp protection. However, in a thin tooth placing the pins parallel to the incisal half of the labial surface gives better and safer retention.

c. Tapered (figure 4)

- (1) Using a straight handpiece for upper and contra-angle for lower, sink first pinhole to a depth of $2\frac{1}{2}$ - 3 mm with a #700 tapered fissure bur.
- (2) Use a #600 finishing bur to remove serrations.
- (3) If working free-hand, insert a pin in completed hole and line up the next pinhole using this as a guide.
- (4) The need of a paralleling device will depend on the bridge span, operator skill, and whether tapered or parallel pins are being used.

Parallel

- (1) The vast majority in this instance will require a paralleling device. Several such instruments are available, ie: Loma Linda Parallelemeter, Chayes Dental Instrument Corp., Danberry, Conn. Pontostructor, JF Jelenko and Co., Inc., New Rochelle, NY.
- (2) Prepare pinholes to a depth $2\frac{1}{2}$ - 3 mm using a twist drill usually of size 0.70 mm. (Table 1)

SIZES FOR PARALLEL PIN TECHNIQUE				
Twist Drill Sizes	mm	Impression Pins mm	Platinum Iridium Pin	(Twist drill) Inches
5/0	0.50			.020
4/0	0.60	0.59 x 6.5	0.55 x 5	.024
3/0	0.70	0.69 x 6.5	0.65 x 5	.028
2/0	0.80	0.79 x 6.5	0.75 x 5	.032
0	0.90			.035
1	1.05			.041

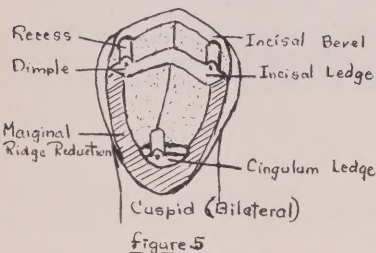
TABLE 1

6. Incisal Bevel and Finishing Line (figure 4)

- a. Bevel the incisal edge at a 45° angle extending from the proximal cut to the distal boundary and from the prepared lingual surface to a point where all of the included incisal edge is protected.
- b. Pinholes may be bevelled.
- c. Complete the lingual area which lies cervical to the cingulum ledge blending it in with the proximal cut. Finish as a chamfer and accentuate the margin by using a small round stone or finishing bur.

The uni-lateral preparation is now complete.

Variations



- a. Bi-lateral preparation (figure 5)
- b. Cuspid preparation (figure 5)
- c. Combined pinholes and grooves.

Retainer Fabrication

1. Direct

- a. With Plastic Pins:

- (1) Prepare tapered pinholes.
- (2) Insert petrolatum lubricated Williams Plastic Pins which are of the same dimensions as the No 700 tapered fissure bur.
- (3) Cut the pins for 1 mm extension beyond the depth of the hole.
- (4) Form a retentive head on the pins with a warm spatula.
- (5) Apply a thin layer of cold-cure acrylic (Dura-lay) to stabilize the pins. (or use inlay wax alone.)
- (6) Apply additional wax, carve and cast.

b. Without Plastic Pins:

- (1) Lubricate pinholes.
- (2) Apply inlay wax and partially carve the pattern.
- (3) Heat a suitable instrument (explorer or Pinwaxer) and use it to flow and force the wax to the depth of the pinholes.
- (4) Carve and cast the retainer.

2. Indirect

a. Rubber Base Only:

- (1) Prepare a tray
- (2) Apply rubber base into the pinholes using a fine tip syringe combined with a blast of air.
- (3) From the impression pour a stone die, wax up and cast the retainer.

b. Combination of Rubber Base and Tapered Plastic Pins:

- (1) Proceed as for direct pattern above (with plastic pins) to the fourth step.
- (2) Tray must be sufficiently oversize to allow for pin extension.
- (3) Inject rubber base in line with the pins to prevent displacement.
- (4) Remove the impression along the axis of pinholes.
- (5) Pour up a stone die, wax up and cast the retainer.

c. Combination of Rubber Base and Parallel Steel Pins:

- (1) Prepare pinholes with a 0.70 twist drill.
- (2) Insert lubricated steel impression pins (0.69 x 6.5) into the pinholes.
- (3) Using an oversize tray, take a rubber base impression.
- (4) If Silver Plating the impression:
 - (a) Leave the steel pins in the impression. (If some stay in the tooth when the impression is withdrawn, simply replace them in

the rubber base without fear of distortion.)

- (b) Silver plate and pour up the die.
- (c) Remove and discard the steel pins.
- (d) Insert lubricated, threaded Platinum Iridium pins (0.65 x 5) into the die.
- (e) Apply a thin layer of cold cure acrylic to the lingual surface of the die to stabilize the pins.
- (f) Apply inlay wax, carve and cast the retainer.

Note

- (i) If steel pins are used, always electroplate. The Platinum Iridium pin in the procedure becomes part of the casting.
- (5) If a Stone Die is Desired:
 - (a) Remove steel pins from impression and substitute nylon (Perlon) pins of identical size.
 - (b) Heat the pins using a hot spatula.
 - (c) Pour a stone die.
 - (d) Apply wax, carve and cast the retainer.
- (ii) The casting is done in the normal manner except that the burn-out must be started in a cold furnace. In this instance the pin is cast.

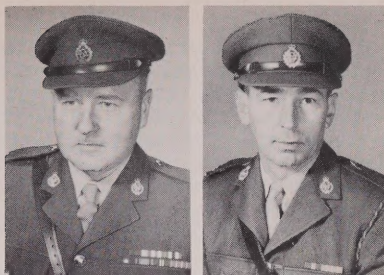
Conclusion

1. Regardless of what type of retainer is used it is essential that:
 - a. It be strong enough to withstand functional forces.
 - b. The preparation does not endanger the pulp.
 - c. It be esthetically acceptable.
 - d. The technique of construction can be carried out by the average operator.The pinledge retainer meets all of these requirements with ease.

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PRESENTING DENTAL HEALTH INFORMATION
A STUDY OF TWO METHODS

Major JVP Chatwin, CD, DDS, DDPH
Major JW Jolly, CD, DDS, DDPH



The need to provide dental health education to the Service member has been a constant concern of the Corps, but the value of some of the approaches has been questioned. One facet of the RCDC health education program has been the wholesale distribution of pamphlets particularly during Dental Health Week each year. The question is asked, how effective is the literature handout aspect of an educational effort? This question becomes more pertinent in view of the reduced availability of complimentary pamphlets and the rising cost of educational materials. Verbal communication between dentist and patient in the educational process is not enough. The dentist also needs educational materials in the form of leaflets, pamphlets, charts and pictures to reinforce what has been said.

It is generally accepted that hand-outs reinforce a message. Yet, in discussion with Dr McFarlane of Hall Commission fame, it appears that little work has been done in the field to prove that such is the case. After a review of the literature and discussions with the Health Educational Adviser at National Health and Welfare it would seem that to find answers specific to the dental field more work is needed.

Whealy¹ has pointed out that numerous surveys have been published about reading habits of the populace, and the effectiveness of print in general. She also noted that evaluations have been carried out by many departments of the Canadian Government but that these have been mainly in the area of pretesting the context for clarity, appeal, persuasive language, or format. There has seldom been a scientific follow-up by interview or questionnaire to ascertain whether pamphlet recipients did, in fact, gain in knowledge and consequently use it to alter their habits.

A survey found that the pamphlet "Good Eating With Canada's Food Guide" was successful as a source of information for many people and also served as an impetus for an examination of personal eating habits.

Waples, Berelson and Bradshaw are reported³ to have found that even short periods (fifteen minutes) of reading can produce an attitude change which is measurable at the end of eight months.

Starkey⁴ has demonstrated that simple methods of presenting information are as effective as more complex ones. Some work indicates that a mimeograph sheet is as effective as the glossy hand-out providing it is specific to the message. Starkey has also shown that individuals with a high education level gain more knowledge than do those with a low education level regardless of the method of instruction used. Eldersveld⁵ has shown experimentally that the face-to-face discourse will always be most successful and may be necessary to reach the less educated—"especially since survey findings show that among those with Grade VIII education, only 43-48% are readers, as compared to 83-92% among those with college education". The education level of Canadian Forces recruits indicates that for the year 1966-67 74.9% would be considered as readers and they would therefore gain from pamphlets alone if they can be motivated to read them.

In a mental health research project Payne⁶ found that the greatest effect occurs when the pamphlet is given in combination with a lecture on the same topic

Klapper⁷ quotes Berelson who in 1948 came to the pessimistic conclusion that: "Some kinds of communication on some kinds of issues, brought to the attention of some kinds of people, under some kinds of conditions, have some kinds of effects". The correct set of variables for the Service situation must be determined if positive results are to be achieved in the RCDC program. A review of the material selected over the years for Corps programs indicates a shotgun approach in the procurement and distribution of health educational materials. Perhaps if hand-outs do just reinforce a message then the Corps should concentrate on one or two aspects of dental care and direct the literature on these selected lines.

How effective then is the literature hand-out aspect of a Health Education program? Based on the hypothesis that a pamphlet specific to dental health which is reinforced by a verbal message either on its contents or on the same general subject is valuable and that the pamphlet unsupported by a lecture has reduced value, a study was undertaken to determine whether two methods of presenting dental-health information have value in the younger age groups, and if they do which is the better method.

Method

Pamphlet Material

The Dental Division, Dept of National Health and Welfare recommended and made available a supply of the pamphlet, "Tooth Test for Teenagers". This is a single sheet of folded paper with sketched dental illustrations and nine multiple choice questions on the centre two panels. The front has a dental cartoon and the back panel contains the correct answers to the questions asked inside.

Sample

Two bases containing a number of grade 8 and grade 10 classes were selected. These two grades were chosen since surveys show that these two levels evidence the highest interest in dental health with girls more interested than boys, as might be expected. For comparison three groups of young recruits were incorporated in the study. Specifically, three grade 8 classes from Canadian Forces Base Rockcliffe, three grade 10 classes from Canadian Forces Base Petawawa and three recruit classes undergoing training in Camp Petawawa comprised the sample population, and were grouped as follows:

Group A : 1 grade 8, 1 grade 10, 1 Service group
Group B : 1 grade 8, 1 grade 10, 1 Service group
Group C : 1 grade 8, 1 grade 10, 1 Service group

Phases of Study

Phase I

Group A samples were given a 30-minute lecture based on and specific to the pamphlet "Tooth Test for Teenagers" and, after the lecture they were given the pamphlet for home study.

Group B had a general dental health lecture and were then given the pamphlet and instructed to read it. No specific reference was made to the pamphlet or its contents during the lecture.

Group C received neither lecture nor pamphlet and were used as control.

Phase II

Two weeks after the lectures were given all three groups were tested using a printed questionnaire reproducing the nine questions found in the pamphlet. Table 1.

TABLE 1

ORAL HYGIENE QUESTIONNAIRE

1. What is the main dental problem for teenagers?
 - A. tooth decay ()
 - B. gum disease ()
 - C. crooked teeth ()
2. Most people lose their teeth through decay.
 - True ()
 - False ()
3. Sugars and starches cause tooth decay by:
 - A. weakening the gums and letting infection in ()
 - B. forming acids which dissolve enamel ()
 - C. being deficient in vitamins and minerals ()
4. Eating good food makes the enamel of your teeth stronger.
 - True ()
 - False ()
5. Tooth decay can be largely prevented by (select two):
 - A. brushing teeth twice a day ()
 - B. cutting down on sugars and sweets ()
 - C. drinking more milk ()
 - D. having decayed teeth taken out ()
 - E. brushing teeth after every meal ()
 - F. chewing gum ()
6. Your dentist can help you to protect your gums, if you visit him regularly, by:
 - A. frequent X-rays ()
 - B. removing tartar deposits and cleaning your teeth ()
 - C. checking your teeth for cavities ()
 - D. applying sodium fluoride to your teeth ()
7. The best dentifrice is:
 - A. plain water ()
 - B. an ammoniated dentifrice ()
 - C. baking soda and salt ()
 - D. the least expensive ()
 - E. a stannous fluoride dentifrice ()
8. If you can't brush your teeth after meals, the next best thing is to:
 - A. eat an apple ()
 - B. chew gum ()
 - C. rinse your mouth with water ()
 - D. use a toothpick ()
9. The most important reason for maintaining good teeth.
 - A. to keep up bodily resistance to disease ()

- B. for a good smile and a pleasant appearance ()
- C. it costs less to maintain than to repair ()
- D. oral hygiene is part of general cleanliness ()
- E. for chewing food efficiently ()
- F. for clearness in speaking ()

Results

Shown in Table 2 are the numbers of correct answers tabulated for the nine questions.

TABLE 2
CORRECT ANSWERS

CORRECT ANSWERS	0	1	2	3	4	5	6	7	8	9	% CORRECT
<u>TEENAGED SOLDIERS</u>											
A - n-26	0	0	0	0	0	2	10	7	1	6	77.3
B - n-29	0	0	2	1	6	7	9	3	1	0	59.3
C - <u>n-37</u>	0	0	1	3	7	10	10	4	2	0	57.9
n=92											
<u>GRADE 10 STUDENTS</u>											
A - n-28	0	0	0	1	0	3	3	12	5	4	77.7
B - n-24	0	0	0	1	2	6	7	6	2	0	65.2
C - <u>n-24</u>	0	0	1	1	4	11	3	4	0	0	56.4
n=76											
<u>GRADE 8 STUDENTS</u>											
A - n-33	0	0	0	0	1	2	7	8	11	4	79.4
B - n-28	0	0	3	1	2	9	4	6	2	1	61.5
C - <u>n-32</u>	0	0	0	1	11	10	6	4	0	0	55.9
n=93											

A Chi square evaluation of the data in Table 2 was made. A comparison of the three groups showed that the use of the pamphlet plus a specific lecture on its contents very significantly improves the results achieved on a test of that content after a two-week period when compared with the use of the pamphlet and a non-specific lecture or a control group who had neither pamphlet or instruction. $\chi^2 = 11.88$ with 1 df and was significant at the 99% level with 2 df.

Comparing the group who received the pamphlet and a specific lecture with the control group, χ^2 11.88 with 1 df and was significant at the 99.9% level.

Comparing the group who received the pamphlet and a non-specific talk with the control group, a significant improvement was found at the 95% level and χ^2 4.87 with 1 df.

Finally comparing the group who received the pamphlet and a specific lecture with those who received the pamphlet and a non-specific lecture, an improved test result was noted but it was not significant at the 95% level of confidence.

In summary, the results showed:

1. the use of a pamphlet and a lecture specific to its contents gave the most significant improvement in test results over the control group.
2. the group who heard a non-specific lecture and presumably read the pamphlet also showed a very significant improvement over the control group.

Conclusions

This study shows that reading a pamphlet does have some value, but that when the reading is reinforced by a specific message on its contents the value is greatly increased. The results would indicate that the indiscriminate handout of dental health literature is of little value in the Corps Preventive Dentistry program.

It is recommended that:

1. dental officers and hygienists should be discriminate in issuing dental health literature to Servicemen, and
2. pamphlets whether given to individuals or groups, should be accompanied by a brief talk specific to its content. In this way best value can be obtained from the material,
3. the RCDC acquire or produce pamphlets that will be aimed specifically at increasing the servicemen's knowledge of prevention of dental ills, and the part that his base dental clinic and staff play in improving his dental health.

Summary

The results obtained from young persons on a test of dental health knowledge two weeks after receiving a pamphlet and a lecture, either specific or non-specific to its contents, were significantly better than the results of a control group using only their general knowledge to answer the same questionnaire.

The best results were demonstrated by the group who received the specific lecture on the pamphlet.

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A DENTAL CAREER

WO JAJ Fret



Last year the DND school at Canadian Forces Base Rockcliffe started a programme of career counseling for grades seven and eight. When the school nurse approached the dental clinic for assistance in presenting information about the dental profession, the opportunity to spread "the gospel" and wave the flag of the RCDC was welcomed. This is what evolved.

There were two groups of about 15 pupils each and it was decided to make two presentations to each group.

For the first meeting, the dental therapist went to the school and gave a talk during which he outlined the different careers associated with dentistry, starting with the functions and career opportunities of the various auxillary groups. Naturally, a military career in the RCDC was described just in case some bright young fellow wanted to follow his father's footsteps in the Canadian Forces. This was followed by "How to Become a Dentist", which constituted a presentation of what dentistry is all about and its importance in the much larger field of general health. A film was obtained from the RCDC School entitled "Patterns of a Profession". This is an excellent two reel colour film, ideally suited for the purpose. Indeed it had quite an impact on the students. If time is limited the film presentation may be restricted to the first reel as it is an entity on its own. Anyone wanting to use this film however should preview it, as the portion regarding dentifrices should be supplemented with suitable comment to update this information.

The second meeting was a visit to the dental clinic where the functions of the various auxillary groups were reviewed and some of these demonstrated. A model was pounted, an x-ray was taken, the pupils saw plastic and rubber being "made" right in front of their own eyes. The sound of a "drill" at 300,000 RPM started questions flowing as the mention of the word turbine, on an "Air Force Station" was magic. The dental therapist gave a tooth-brushing demonstration after which each child received a pamphlet on mouth care and some disclosing tablets which the students referred to as "the red pills".

As a follow-up on these meetings the students were required to write a short essay for their teacher about their visit to the clinic. This programme was so well received by pupil and teacher alike, that a repeat performance has been requested. Needless to say the RCDC in Rockcliffe will oblige.

DIVISION OF DENTAL SERVICES, CFHQ--CIRCA 1969

Captain E Clark, BEM, CD

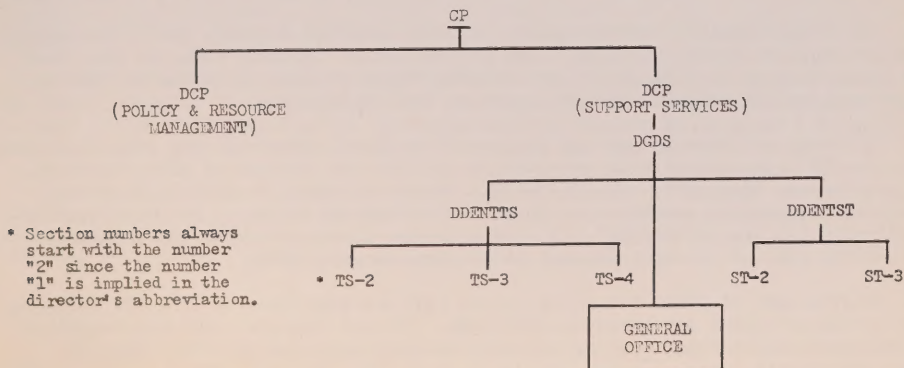


Beginning with the initial stride towards the unification of Canadian Forces in 1964, many changes have been made within the organizational frame of CFHQ. Some changes have been obvious; others have been less noticeable, although exerting as much influence on daily routine as those that are by their very nature more self-evident.

In consequence of these alterations, a brief exposition on the present-day structure of the Division of Dental Services as an entity within CFHQ may help those in other regions gain some understanding of its structure. Additionally, this article may be of guidance to those fortunate individuals who may one day serve at CFHQ.

The principal dental organizational element at CFHQ is the Division of Dental Services having as its head the Director General of Dental Services (DGDS). Many will not realize that it has only been since the unification process began in October, 1964 that there were any guide lines to determine whether such an element would be headed by a Director General or Director. As the organization of the RCDC evolved, it was headed initially by a Director and then, some years before unification, by a Director General. The responsibilities of each of these appointments were never as clearly defined as they now are and once the "key" of rank is inserted into the organization's lock, it soon becomes evident to the newcomer which element has as its head a Director General and which has a Director.

For example, DGDS is part of the Chief of Personnel Branch. The CP Branch is headed by a Lieutenant-General (or equivalent) and has at the moment two Deputy Chiefs in the equivalent rank of Major-General. Next in the organization structure is the Division headed by a Director General in the rank of Brigadier-General. There are as many Divisions within a Branch as are required and they are always headed by a Brigadier-General. Within a Division are one or more Directorates with an officer of the equivalent rank of Colonel in charge with the title of Director; forming part of each Directorate are one or more sections headed, usually, with a Lieut-Colonel or equivalent as a Section Head. The attached diagram depicts the current set-up of the Dental Division which conforms in its basic structure to that of all other Divisions at CFHQ.



In addition to there being ranks stipulated for each level of Divisional organization there are also specific terms of reference or "reasons for being". These outline in brief terms, the responsibilities of the DG to the Branch Head and in turn the responsibilities of Directors to the DG and the Section Heads to the Directors. In the day-to-day scramble to meet commitments, it is sometimes necessary to cross these "lines" but in the main, the activities assigned to either of the two Directorates within the Dental Division are within the areas defined in the terms of reference. It might be added that these guide lines are being constantly revised to ensure that functions and scope of activities are clearly defined.

To give further dimension to the structure and functions of a Division, it would be apropos to describe in this narrative the responsibilities of DGDS to the Chief of Personnel, and the responsibilities of each dental directorate to DGDS. In all cases, the responsibilities listed will be the major activities only.

Stated succinctly, DGDS is responsible to CP for all matters pertaining to the dental health of the Canadian Forces. This definition includes documentation, statistics, material, clinic accommodation and liaison with the dental profession, universities, other Government departments and dental corps of other countries. He is also head of the Royal Canadian Dental Corps.

An outline of the major responsibilities of the two Directorates within DGDS would include such subjects as shown hereunder.

Director Dental Staffing and Training (DDENTST)

DDENTST is responsible to DGDS for the organization of the dental services, its establishments and organizational charts; manning; career planning; recruitment; professional and technical training, including trades specifications and courses; DOTP annual quota and practical phase training; mobilization planning and the RCDC Reserves.

Director Dental Treatment Services (DDENTTS)

DDENTTS is responsible to DGDS for dental treatment service including preventive dentistry programming; dental documentation and statistics; radiation hazards; provision and maintenance of, and accounting for, dental material; dental clinic accommodation; and financial estimates and encumbrances.

There are many other functions in which both Directorates become involved but those listed include the principal activities of each side of the dental "house" at CFHQ.

To provide administrative support, a small staff of military and civilian personnel is employed by the Division. The general office (Orderly Room) is the focal point serving as it does as a file and correspondence registry. Duties and personnel are assigned in keeping with the needs of each Directorate.

Although not forming part of the Dental Division, there are two other elements within the CP organization that have much to do with the careers of RCDC personnel. Both are "Career Managers". One is embodied within Director General Postings and Careers (DGPC) and is identified as Director Postings and Careers, Air Services/Dental Officers and Men (DPCAS/DOM). The other is the Director Senior Appointments (DSA) and is part of Director General Senior Appointments (DGSA).

The careers of LCOLS and above in the RCDC are administered by a DSA and personnel of Major's rank and below by DPCAS/DOM. In both spheres, DGDS has established close association thus ensuring effective communication in the vital area of career advancement.

The RCDC News

CANADIAN FORCES DENTAL SERVICE SCHOOL

Effective 1 Jan 69 the RCDC School was redesignated as the Canadian Forces Dental Service School (CFDSS). This change is in keeping with the policy of converting, where applicable, unit titles to the more descriptive titles associated with the Canadian Forces.

DGDS and Unit Commanders Conference

The 19th annual Corps Conference was held in Ottawa December 4-6 with all unit Commanding Officers, LCOL Brick from Mobile Command and Major C Brown from Training Command in attendance.



Seated L to R - COL RHG Cunningham, BGEN BP Kearney, COL GR Covey, COL JW Turner, COL CM Cornish.

Centre Row L to R - LCOL G MacDougall, LCOL JW Fletcher, MAJ C Brown, LCOL JC Brick, LCOL NA Butcher, LCOL WH Harrington, COL GC Evans, LCOL LA Richardson, LCOL GE Windsor.

Back Row L to R - CAPT E Clark, MAJ PR McQueen, MAJ JVP Chatwin, COL LG Craigie, COL SG Bagnall, MAJ CA Casterton, LCOL IR Pierce, LCOL DH Protheroe, MAJ PL Griffiths.

Division News

Visits

LCOL JW Fletcher Staff Officer Dental Materiel attended the Dental portion of the Second Meeting of the Quadripartite Working Group/Medical Supplies held in London England 23 Sep to 27 Sep 68. He then proceeded to Germany and visited 4 Fd Dent Coy and 35 Fd Dent Unit during the period 28 Sep to 4 Oct 68.

MAJ JVP Chatwin visited the dental units in Europe in January to review the RCDC Preventive Dentistry Programme and demonstrate the self-preparation technique. While in Soest he addressed dental officers from four nations attending a Dental Officers Professional meeting organized by 4 Fd Dent Coy.

Sports

WO Sullivan skipped a team from CFB Uplands Curling Club to win a 3-game competition at Ottawa Hunt and Golf Club 18 Jan 69.

11 Dent Unit

Sports

Hunting

Using a Winchester 308, CWO Herb Bilbey downed three elk on the last day of the season. Herb ran into a family of elk near Calgary and, without even lowering his rifle, snapped off three heart shots.

Curling

LCOL Don Hillier, throughout the festive season, was barely able to resist the temptation to celebrate his wife accomplishing a feat beyond his capability. He is very proud to claim that he is the husband of a gal who had skipped her rink to an "Eight Ender".

12 Dent Unit

Memorial - Dr JS Bagnall - Book Collection

The dental staff of Victorial General Hospital, Halifax recently dedicated their library to the memory of Dr JS Bagnall. This honour is deeply appreciated by the Bagnall family.

Dental Officer Training Plan

OC DM Moore has been awarded the \$1,000.00 Faculty of Dentistry Entrance Scholarship for the highest scholastic standing in the imperative university classes required for admission to the Faculty of Dentistry at Dalhousie University.

Preventive Dentistry - A True Story

Time: 11 Dec 68 1330 hours

Place: Dental Clinic, CFB Gagetown, N.B.

Major Cobb has just completed a description of fluoride protection to a platoon from 2 Bn RHC and has turned the group over to MWO Therrien for self-preparation and topical fluoride application.

MWO Therrien - "Has everyone got his toothbrush?"

Platoon SGT - "No Sir, only half the men."

MWO Therrien - "Why is this? They were all supposed to bring their toothbrushes."

Platoon SGT - "No Sir, we were told that only the single men were to have them and the married men did not need them."

MWO Therrien - "Double them back to their lines to get toothbrushes."

On checking out the situation, it seems that WO Shields' telephone call that morning had been taken with typical military efficiency. He asked the RSM to make sure that "every single man has his toothbrush".

13 Dent Unit

Special Events

CAPT TC Ringland lectured on Bacteriology to the Ontario Dental Nurses and Assistants at the Belleville Collegiate Institute on 14 Nov 68.

On 19 Dec 68 COL RHG Cunningham also spoke to the same group on "Filling the Root Canal and Apiectomy at One Appointment" using the film "Immediate Endodontics and Periapical Surgery".



Guests of honour and co-hosts at
13 Dental Unit Christmas Party.

Down the ladder from the left -
MGEN AC Hull, LCOL WW Anglin,
COL RHG Cunningham, COL HA
Carswell.

14 Dent Unit

Curling - RB Jackson Trophy

On 18 Jan 69 ten rinks curled in the annual unit competition for the Jackson Trophy. Quite a number of non-curlers also attended and a fine evening get-together followed the bonspiel. A Shilo rink skipped by Capt Dave Jones and assisted by WO Henry King, Mrs Jones and Mrs King won the trophy and the runner-up rink was skipped by CAPT George Jacques with CAPT Herb Doyle, Mrs N Petersen and Mrs Jacques. CAPT Poy, CPL Scheer and their wives took the hard-luck prize home to Gimli.



Winners RB Jackson Trophy

Left to right -

WO Henry King

Mrs King

Mrs Jones

CAPT Dave Jones - skip

35 Fd Dent Unit

by SGT DT Moran

Duty Trips and Visits

LCOL JW Fletcher visited the unit from 2-5 Oct and provided much information on dental stores and equipment.

During the month of Oct the weather in the Lahr area was cool and very wet, the golf courses mushy and sometimes completely flooded. As nothing could be done about the weather the CO did the next best thing and headed a dental team to sunny Sardinia from 8-29 Oct. The team comprised of LCOL DH Protheroe, Major CM Mason, WO CH Adams, WO RW Lowery and PTE SA McEllistrum carried out the Preventive Dentistry Program for servicemen, examination of DND School children plus provided comprehensive treatment to servicemen and their dependants. It was reported that the trip was a complete success. There was no mention of "plush hotels" "golf courses" or "sun bathing".

Special Events

No 1 Clinic was the host clinic for the Annual Unit Christmas Party that was held on 13 Dec at the Adler Hotel in Reichenbach. The party was a roaring success, complete with Santa Claus who gave out gifts to everyone. The "Entertainment Committee" of 1 Clinic provided an enlightening skit on an average working day at the clinic -- suspicion confirmed! With plenty to eat and drink an excellent time was had by all.

Other clinics to participate in the Christmas festivities were 3 Clinic where CAPT Weeks entertained the clinic staff at his residence; 4 Clinic held an "At Home" where all RCDC personnel were dressed in Blues. And that just about ends the merry making for another year.

Leave

Several members of the Unit took to the hills during the Christmas Holiday. Among them were: Major Yvon Cyrenne, Captain Bob Fortier and Dr Malcom Stewart (Civilian NPF Dentist). All spent a few days skiing at Erdfendorf, Austria. Major Bob MacDonald tried the slopes at Lech, Austria. CPL Muriel Fletcher and Mrs Nancy Bennett (Civilian Dental Assistant) were skiing at the US Recreation Center Bertchesgarten. All returned safe and sound with no broken bones. WO Bob Lowery was thinking about going skiing but chickened out and asked to have his leave cancelled when the snow fell.

Marriage

CPL Tom Girdlestone and CPL Betty Price exchanged marriage vows on 16 Nov at Toronto, Ontario. Betty was the senior corporal and Tom was a little worried at how he was going to assume his proper place as "Head of the house" until CFHQ came to his rescue and decided to give Betty her release effective 14 Dec. Our best wishes for a long and happy marriage go out to this fine couple.

Accommodation

Major MacDonald and SGT Giroux vacated their temporary clinic accommodation at Chievre near SHAPE HQ and moved into the permanent dental clinic in the SHAPE International Hospital.

Training and Conferences

LCOL DH Protheroe attended the Annual DGDS Conference from 4-6 Dec and reports that it was very informative and interesting.

Dental Officers taking advantage of Seminars in General Dentistry sponsored by the US 2nd General Hospital at Landstuhl, Germany from 24-25 Oct were: MAJ JLY Cyrenne, MAJ JPA Legendre and CAPT BH Weeks.

Another General Dentistry Seminar this time sponsored by the US 97th General

Hospital at Frankfurt, Germany from 4-7 Dec was attended by: CAPT RF Cooper, CAPT JAR Fortier and CAPT WD MacKenzie.

SGT Dan Hardy has returned after topping the D Lab Tech Pay Level 6 Course at the RCDC School - well done Dan.

CPL Dick Gratton has successfully completed the DEM Tech Pay Level 5 Course at 1 DED Petawawa. During his stay in Petawawa Dick's wife presented him with a bouncing baby girl -- congratulations on both counts Dick.

Sports

CAPT JAR "Flash" Fortier and LT JP "Boom-Boom" Carrier are both members of the Lahr Officers' Mess hockey team -- more details to follow in the next Quarterly after they play their first game.

The curling rink in Lahr is due to open early in the New Year and the unit curlers have decided that the "Other End" of the two part Horse Trophy, that is well hidden in the CO's office, is going to be returned to its rightful owner - 4 Fd Dent Coy in return for the Horse's Head.

Miscellaneous

3 Clinic personnel lead the pack in station activities with CAPT Brian Weeks as Deputy Mayor of 3 Wing Community Council, CPL Norma Boles and PTE Betty Tucker are both on the Entertainment Committee of 3 Wing Corporals' Club - that leaves MAJ Cyrenne to look after the clinic.

4 Clinic reports only one active member of the clinic and that is CAPT Bob Cooper who is a member of the 4 Wing Officers' Mess Entertainment Committee.

1 Clinic has Major Mason as Vice President of the Lahr Toastmasters Club and WO Collin Adams is a Councillor in the Lahr Community Council.

Judging from the number of new cars at 1 Clinic one has to think it is either getting close to rotation time or some were fortunate enough to benefit from the pay raise -- lets just say it is nearing rotation time.

* Editors Note

SGT Moran is one of the newly appointed unit associate editors. This news submission is published as submitted as a demonstration of the new talent that the Editorial Board now has to assist them.

4 Fd Dent Coy

Field Exercises

HQ, five clinic detachments and a laboratory section participated in the 2 Br Div "Exercise Keystone" from 21 Oct to 2 Nov 68.

Conferences and Meetings

CAPT GR Nye attended the USAREUR General Dentistry Training Seminar in Landstuhl, Germany 24-25 Oct 68.

LCOL GE Windsor attended a No 1 Dental Group (RADG) study conference in Paderborn 29 Nov 68.

Special Events

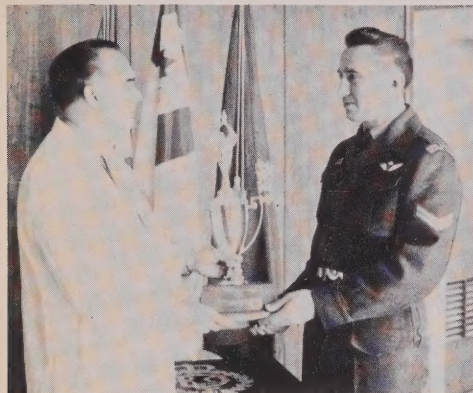
On 23 Nov 68 a combined Get Acquainted and Christmas Party was held in the Ft Chamblay SGTs' Mess for all members of the unit and their wives. This turned out to

be a complete success and an evening of many surprises when LCOL (Hot Lips) Windsor took over as lead trumpet in the orchestra and gave his musical rendition of Edelweiss.

CFDSS

Courses

CPL Donald Langford received the Chief Instructor's Trophy for standing first on the first Dental Assistant Pay Level 3 Course conducted under the new Canadian Forces Training Standards held from 7 Oct to 22 Nov 68. A visit to the Ontario Museum of Natural History was included in the course.



CPL Langford from Shilo Dental Clinic
receiving the Chief Instructor's
Trophy from LCOL AG Andrews.

Shaw's Dental Laboratory with 178 technicians on staff and the George Brown College of Technology in Toronto provided the staff laboratory technicians and members of the Pay Level 5 and 6 courses with an opportunity to observe civilian laboratory training techniques.

Visits

MGEN WK Carr, Commander Training Command, visited the School 4-5 Nov 68 where he inspected the training and treatment facilities.

Miss Amer of the Department of National Health and Welfare visited the School 11 Oct 68. She was particularly interested in the practice of dental public health and dental health education and was complimentary of the RCDC Preventive Dentistry Programme.

Ticonium representative, Mr Joe Bordeau delivered a short lecture to the Pay Level 5 Laboratory Technician Course.

Guest Clinicians

LCOL Sills addressed the Canadian Academy of Prosthodontics in Toronto 27 Nov 68 and the Ottawa Dental Society 20 Jan 69.

Major Marion spoke to the Toronto Academy of Dentistry on "Insight into German Orthodontics" on Nov 28, 1968.

Sports

CAPT DA Graham with PTE WO Cudmore, MWO KE Laurence and CPL RW Danyluck on his team won the Opening Green Bonspiel and third prize in the A Event of the 15th Annual Yuletide Bonspiel at CFB Borden.

1 Dent Unit

Special Events



Major Bourget receiving his diploma on completion of a seven-week fixed partial denture course at US Naval Dental School in Bethesda, Maryland.

On 18 Nov 68, dental officers in the Ottawa Area attended an all day Ottawa and Eastern Ontario Dental Association clinic at NDMC with LCOL PD Crowe of the US Army Dental Corps, as guest clinician dealing with the subject of Prosthodontic Restorative Dentistry.

1 Dent Eqpt Dep

LT RD Townshend joined the depot staff as Warehouse Officer on 21 Oct 68.



SGT MJ Hall was presented his CD by Major Griffiths in November 1968 and promoted SGT 1 Jan 1969.

Professional Training

University of Michigan, Ann Arbor, Michigan, USA

CAPT NS Misura - Endodontics - 2-13 Dec 68

US Naval Dental School - Bethesda, Maryland, USA

LCOL JM Smith - Oral Pathology - 13-17 Jan 69

CAPT VJ Lanctis - Oral Surgery - 6-10 Jan 69

CAPT HM Amos - Oral Surgery - 6 Jan-21 Feb 69

ENT Air Force Base - Colorado Springs, Colorado, USA

CAPT JD McCallum - Oral Surgery - 20-31 Jan 69

Canadian Forces Medical Training Centre - Camp Borden

Medical and Dental Officers NBCW Course - 29 Jan-14 Feb 69

MAJ IAC MacDonald; CAPT JEG Joubert

Training

Canadian Forces School of Physical and Educational Recreation - Camp Borden

Badminton Coaches Course - 26 Feb-5 Mar 69 - CAPT KH Rosengart

Combined Air Operations School - CFB Rivers

Basic Parachutist Course - 17 Feb-14 Mar 69 - CAPT JL McNeill;

Canadian Forces Dental Service School, CFB Borden

Dental Therapist Pay Level 7 - 6 Jan-27 Jun 69

SGTs Arsenault JB, Lambert JP, Veinot RD

Dental Therapist Pay Level 8 - 20 Jan-15 May 69

MWO Therrien JCA; WO Barrett LR

Dental Laboratory Technician Pay Level 4 - 3 Feb 69

CPLs Alkenbrack AM, Boulanger JFGP, Bowser GG, Butson JF, Daniels MM (AF)(W),
Hildebrandt GG, Lapointe MTV (AF)(W), Likins JA, Riel GJA; PTE Cudmore WG

No 1 Dental Equipment Depot - CFB Petawawa

Conversion to Dental Equipment Maintenance Technician - 6 Jan-28 Mar 69

WO MacPhee JG; SGTs Dumas PJ, Hall MJ, McKinnon HJ, McRoberts DT, Wadden GM;
CPLs McKay DH, Nadeau LJP

Canadian Forces School of Mechanical Engineering - CFB Chilliwack

Sr NCO Course - 8 Jan-4 Feb 69

CPLs Ayerst HE, Bosch P, Braslins IA, Buxton WD, Cormie JD, Danyluck RW, Hatcher LR, James RK, Peck AH, Todd RE

Sr NCO Course - 12 Feb-11 Mar 69

CPLs Allen ML, Audet JAN, Gapmann HKK, Hope NJF, Kukurudziak TR, Porteous CW,
Proud IG, Thorburn JH, Tweed WE

Training with Industry

Ritter Equipment Company, Rochester, NY

Installation, Maintenance and Repair

13-17 Jan 69 - WO Duve EA

Ceramco Porcelain to Gold Fabrication
20-24 Jan 69 - MWO Laurence KE

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

SGT(AF) Smith CW; CPL (AF)(W) Breadner BF, CPL Charlebois JF, CPL (AF)(W) Grandchamp MC, CPL (AF)(W) Gruener I, CPL Kilgrain BC, CPL (AF)(W) Nowlan SJ; PTE Kurbis DP, PTE (N)(W) Latimer HVP; Mrs R Dyrland, Mrs S Burrows, Mrs EJ Powell

Promotions

To WO - Beauvis M, Bleakney JC, Clarke JA, Duve EA, Fraser DE, Peverill LG
To SGT - Atherton JA, Hall MJ, Hollins DJ (AF)(W)
To CPL - Allen DG, Clarke RM, Eden DM, Morphett DJ; Audet MFE (AF)(W)

Retirements and Releases

LCOL FD Charman; MWO Sherry JM; WO Egan PAA; SGT McDow CE; CPL Hewitt DG, CPL (AF)(W) Girdlestone EI (Nee Price); PTE (AF)(W) Ames CA; Mrs D Hynes; Miss GA Haggie; Mrs J Hisson, Mrs AC Mamen; Miss Y Beattie

Vital Statistics

Marriages

Captain DL Brown to Miss Barbara Lynn Bessie; 2LT WA MacInnis to Miss Robin Mary Stedman; CPL Girdlestone TV to CPL (AF)(W) Price EI, CPL Hurding WA to Miss Anick Brassard; PTE (AF)(W) Bondy CA to PTE (AF)(W) Ames CA, PTE Forsythe CH to Miss Lise Norma Filiatreault; CAPT RM Depledge to Miss Marlene Ann O'Connor

Births

Daughter - Captain & Mrs TJ Erskine, Captain & Mrs V Rausch, Captain & Mrs HW Wilford; WO & Mrs PD Peterson; CPL & Mrs JF Butson, CPL & Mrs JRY Gratton, CPL & Mrs WH Renwick; Captain & Mrs OG Lepage

Son - Captain & Mrs WD Fiolek; WO & Mrs CR White; CPL & Mrs B Hannah

Recommended Reading

For Therapists Pay Level 6 and 7 - Cement Bases and Silicates

- a. Restorative Dental Materials - Peyton
- b. Operative Dentistry - Schultz
- c. Clinical Operative Dentistry - Simon

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The

ROYAL CANADIAN DENTAL CORPS

Quarterly

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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney, MBE, CD, QHDS

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

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Canadian Forces Headquarters
Department of National Defence
Ottawa 4, Ontario

Cover Photograph

SGT George Shechosky and his ice sculpture entitled "The Jester". This work of art by SGT Shechosky and other members of the SGT's Mess was painted in a gaudy combination of red, blue and yellow and won first prize in the CFB Moose Jaw Winter Carnival.

THE RED TAPE IN PREVENTION

BGEN BP Kearney, MBE, CD, DDS, QHDS, FICD



Personnel of the Canadian Armed Forces are provided with free dental care. Not spelled out anywhere, but inferred, is a requirement for the Dental Service to make all personnel dentally fit, to maintain them in that condition and to bid them farewell, after long and faithful service, with sparkling dentitions--either their own or the Queen's or combinations thereof.

Throughout the years since World War II, this has indeed been our goal, although knowing full well that we fell far short of it. Throughout those years, and until very recently, our dental officer strength remained well below our establishment figures which were based on a ratio of one dental officer to 750 Service personnel. Whether such a ratio was or was not an adequate one remained of purely academic interest as years went by with little improvement in dental officer strength.

During these lean years we provided treatment on the basis of "the greatest good for the greatest number". This involved bringing as many as possible of the "bad" category mouths into a "pretty good" or "not so bad" category (depending on one's point of view). In fact, a very great deal of our time was spent in bringing those individuals who demanded treatment, to a very high level of dental fitness. We got by this way, actually with very few complaints, but the rub came when we were faced with the panic situation of getting large bodies of troops into a dentally fit condition to proceed on operations or exercises. I do not apologize, gentlemen. Really, I think we did quite well with the resources available.

As of now though we have a rather different situation. Our dental officer strength has improved considerably and our clientele has been reduced although, in honesty, this latter factor has had less impact than one might imagine, as our responsibility for dependant care has increased. We have expanded the duties of our auxiliary personnel in the treatment area and we have available to us new and improved agents and methods for preventing and treating dental disease.

With all these factors in mind we set up a series of studies to determine the true magnitude of our treatment problem and, hopefully, the most effective means of coping with it.

On the premise that the total dental treatment requirement is composed of that being brought into the Forces, that already existing within the Forces, and that occurring as new disease and deterioration of restorations, we broke our studies into three main parts:

* Editor's Note

This paper was presented at the Canadian Forces Medical Service Clinical Conference held in Kingston Ontario, April 24-25, 1969.

- a. the treatment requirements of new entrants,
- b. the treatment requirements of serving personnel, and
- c. the annual maintenance requirement.

I shall briefly describe each of these three studies.

New Entrants

Beginning in December 1966, examinations including bite-wing x-rays, were made on the first 400 male applicants to present themselves at each of the six Personnel Selection Units in Canada for a total sample of 2,400. All examiners had been previously standardized as to method by the study director. A treatment plan was formulated for each individual and all treatment procedures required for optimal dental fitness was recorded. By plotting these required procedures against previously determined treatment timings, it was possible to arrive at the dentist/hour cost of providing the treatment.

Similar examinations were made and treatment planned for female recruits, officer candidates and Service College entrants. The numbers involved were, of course, smaller and probably less significant and will not be used in this presentation. Of interest, however, is that the caries experience of these latter groups was little different from that of the male recruits. That is, their DMFT was similar 'in toto' but contrasted within its components. Generally, the girls and officer candidates were lower in the "decay" and "missing" components and higher in the "filled". These are not surprising findings as they reflect frequently reported socio-economic, educational and oral hygiene factors.

This study showed the average male recruit requires almost nine hours of dental treatment.

Serving Personnel

The Director of Personnel Requirements Control provided a random selection of 640 names of serving personnel from service nominal rolls. Of these, 604 were located and examined by dental officers following detailed written instructions. Eight of the group were serving in the USA and were examined by US Army or Air Force dental officers. Of the 604 examined, 96% were between 21 and 49 years of age.

Again treatment plans were formulated and it was determined that serving members required, on the average, just under six hours of treatment to obtain optimal dental fitness.

Annual Maintenance

To determine the annual maintenance requirements, 25 dental officers were selected and each was required to make dentally fit 15 servicemen who intended to remain in the Service for at least one year after fitness was established. These 15 men, to limit bias, were selected one chance morning of the week, being the first 15 to enter the clinic who could be used in the study.

These men were re-examined 365 days after being made dentally-fit and any new requirements recorded. They were also questioned as to any treatment they might have received during the year from any other Service source or from civilian source while away from their base.

This study indicates that the time required to re-establish fitness after one year has elapsed, ie. the annual maintenance care requirement, averages 1.9 hours; this figure includes the annual prophylaxis and topical application of fluoride.

The dentist/hours for each of the three components of the dental treatment problem are as shown in Figure 1.

Average Treatment Commitments per Serviceman	
Recruit Care	8.87 hours
Serving members backlog	5.93 hours
Maintenance Care	1.99 hours

Figure 1

By plotting these figures, rounded off to even numbers, against the total personnel of the Forces, now approximately 98,000 with an annual intake of 8,000, we find:

New entrants require - 72,000 hours
 Serving personnel require - 540,000 hours
 Annual maintenance requires - 180,000 hours

This all adds up to a figure well in excess of 700,000 hours. Our resources are something under 200,000 dentist/hours per year.



It was immediately obvious that within our resources we could handle the treatment load being brought into the Forces--and--we could, more or less, also take care of the annual increment of treatment requirements occurring to Forces personnel. It was equally obvious that looking after those two components of our treatment problem left us with minus something with which to do anything about that monumental backlog.

Most obvious of all perhaps is the now certain knowledge that, if we hope ever to attain our goal of a dentally-fit Force, some very distinct changes in concept and methods must be incorporated into the system.

These changes must be directed towards reducing the first two components of the treatment problem with a view to providing more and more hours toward whittling away at the backlog.

Considering first the treatment requirement brought into the Forces by new entrants. There is little or nothing that can be done to reduce the amount of dental disease which the recruit brings with him although one can anticipate a gradual reduction in it as a result of ever-increasing consumption of fluoridated water as more and more communities adopt this method of caries prevention. What can be done, however, is to adjust or re-define dental fitness standards for the Service person during his initial engagement period and this we are doing. He will be freed of active carious and periodontal lesions and maintained in a state which, in the judgment of the dental officer, will make him unlikely to become a dental casualty for

one year. Prosthetic appliances for this group will be rare and when placed will be of a type requiring the least expense and time in fabrication. Minor carious lesions may not be restored but simply held static through annual topical applications of fluoride. He will not have had the advantage of a complete dental service but will be in better dental condition than he was when he entered the Service.

This may appear a rather sneaky approach to a problem but is a very realistic and sensible one when it is considered that less than half of recruit intake are likely to become career personnel. By this approach it is hoped to reduce the new entrant treatment requirement by as much as 50% of the dentist/hours required for optimal fitness; a saving in excess of 30,000 hours.

An even more significant reduction can be obtained in the annual maintenance care requirement by application of proven preventive measures. US Navy findings show a reduction of upwards of 70% in new carious lesions to be obtainable by use of the 3-pronged method of fluoride prophylaxis, topical fluoride application and daily use of a fluoride-containing dentifrice. By this means a reduction in the maintenance care requirement of even 50% would result in a saving of 100,000 treatment hours.



To achieve this kind of saving we instituted the RCDC Preventive Dentistry Program on April 1, 1968. Basically, the Program requires all clinically-employed personnel, dental officers and therapists, to devote one full working day per week to applying these preventive measures. This amounts to an investment of 20% of available hours, ie. approximately 40,000 hours to obtain the reduction of 100,000 hours; a net gain of 60,000 hours to apply to the treatment backlog. We now believe that by making increased use of self-preparation techniques that we can cut the time required by clinic personnel to one half-day per week, ie. 10% of treatment time for a net gain of 80,000 hours.

The other main element of the Preventive Program involves all dental officers devoting their efforts one day per week, to making dentally-fit at least two patients who require less than three hours of treatment. Their charts are then coded red and they are recalled annually during the month of their birth dates for re-examination, fluoride and immediate correction of any new defects. The remaining time each week, approximately 60%, is devoted to "demand" dental treatment or "business as usual".

The ultimate aim of the program is, of course, to have everyone dentally fit and on annual recall with the more caries-susceptible mouths on semi-annual recall. The program is kept under constant review and will continue to be subject to amendment as a result of our experience with it and to incorporate improved methods and agents as they become available.

By and large, the program has been readily accepted and is well supported. Quite naturally it got off the ground more quickly in some locations than in others. I think we have very few officers who do not believe that, with this programmed approach to our problem, we do indeed have a real hope of licking it.

In its first year of operation we have exceeded our targets in both the fluoride protection aspect and in red charts. We treated approximately 44,000 patients with fluoride during the year and put in excess of 15,000 red charts in the bank. I consider this a highly creditable showing and believe that we can expect a marked reduction in the magnitude of our problem within five years' time, when we shall repeat our studies.

Before closing, I wish to tell you very briefly what we are doing at the Recruit Schools and what we hope to do. Early in the recruit course, all the new entrants are brought to the clinic in groups of 50. Three hours are allotted to each group. They are conducted through fluoride self-preparation and then receive fluoride topicals followed by dental examination and documentation. Finally they are given instruction in oral hygiene using a combination of films and lecture-demonstrations. They receive no treatment while on recruit training other than that of an emergency nature.

With the opening of our expanded facility at Cornwallis this summer, which will triple the capacity of that plant, we propose to retain certain of the recruits for a period of up to one week following successful completion of their training. The ones retained will be those who require the least treatment, ie. those who can be quickly converted to red-coded charts and can be expected to remain in this category throughout their careers in the Forces. The numbers retained will be the maximum which can be made dentally-fit within the interval between graduations.

We have, of course, similar plans and hopes for the French-speaking recruits at St Jean but are, in fact, planning a more modest expansion there for the interim period prior to that School's move to Valcartier. We have plans for a Preventive Dentistry cum Examination centre at Valcartier, separate and distinct from the proposed clinic in the new hospital.

In summary, the Dental Service has a very large problem on its hands. However, we now have the problem defined and are of the belief that it is not insurmountable. I predict, with confidence, a marked reduction in the magnitude of the problem over the next five years.

Bibliography

1. Scola, F.P. J.A.D.A. 73:1306, Dec 1966.

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READING DEVELOPMENT

Major PR McQueen, DDS



Introduction

Today's Niagara of printed words literally makes it impossible for a reader to keep his head above water. While men of Isaac Newton's era were well introduced to all sciences, comparable men of 1969 must concentrate on specialties of narrow scope within one science. This is by necessity not choice. For the student or the mathematician the volume of literature is too great to allow the pleasure of random reading.

This increasing volume trend will do two things, it will continue and it will accelerate. It is a real problem. Speed reading has evolved as one answer; more can be read in the same time.

Theory

Speed reading is not a gimmick. Speed reading is a form of optical calisthenics and mental sweat. It is the activation of a dormant potential which is the ability of the eyes to record and the brain to interpret at a rate far greater than normally employed.

How do we read normally, and how do we waste or neglect that potential to read faster?

The average reader "sees" by moving his eyes along the lines in a series of rhythmic jumps. After each jump the eyes rest, then focus on one or two words then jump ahead. This procedure continues but with intermittent regressions, during which the eyes move back to preceding words for confirmation. This reading of one or two words at a time is spasmodic and is the pattern of the average person reading 250 words per minute, while he is capable of thousands. The process of interpretation is similar, words are mentally assembled, one or two at a time like building blocks, into phrases and sentences. Unfortunately, the words must be "remembered" until the whole sentence is seen. Regression occurs when a word is forgotten.

We are, what we learn. "Look at Spot run, look look look." Courses in reading development try to break these patterns. Reading patterns are habits and habits are difficult to change.

Procedure

The first goal of reading development courses is to establish the base line for the reader. How fast does he read and what percentage does he retain (comprehension)? Subsequent progress testing scores both factors by calculating the gross reading rate, followed by a short test of comprehension. If the reader correctly answers 70% of the questions, then this is his comprehension score. This percentage value is applied to the gross reading rate to determine the actual or net reading rate.

It is common for the gross reading rate to rise rapidly during the first weeks, usually at the expense of comprehension which may fall from 90% to 30%. This explains the comment "I read it in record time but can't remember a thing". Practice effects the turn-around and comprehension soon rises.

The nucleus of speed reading is FORCE. A forced rate of looking at the words and a forced effort of interpreting what they mean.

The reader must push his rate above the comfort level. If words are missed, they are by-passed. The time needed for regression cannot be permitted. The chances are good that the missed information will be repeated later in the article. One method of pacing is to slide the fingers below the line with the eyes following the fingertips. The emphasis is on key words.

The snarling beast lunged at his hand. Heaving at the door he managed to close it. He sank to the floor in fear and pain looking at the blood on his wrist.

The underlined key words hold the gist of the idea.

This rapid pacing must be practiced if it is to replace sporadic reading with a smooth flowing scan. The search for key words makes the reader identify or read in phrases rather than words.

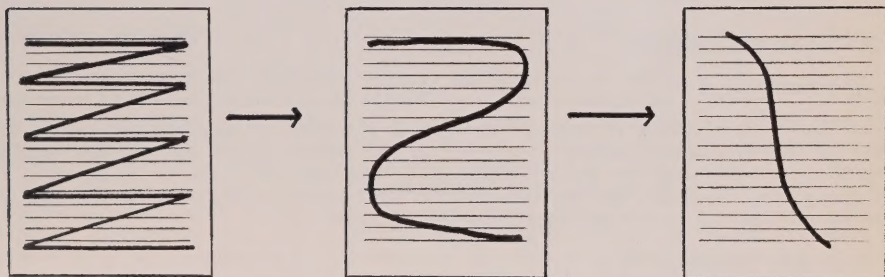
The next step is to increase the pace. The fingertips now move across and down the page in a zig-zag. This practice converts the reading from phrases to sentences.

For example:

Jack be nimble. Jack be quick.
Jack jumped over the candlestick.
The second degree burns were attri-
buted to a broken shoe lace.

The nucleus of speed reading is FORCE. A forced rate of looking and a forced rate of interpretation. As the student learns to "see" by sentences, he must learn to interpret by the sentence. He can no longer read passively waiting for ideas to gel, instead it must become an active process. It is made active by curiosity, what does the author mean, why - how - when? The reader must dig for the ideas. If the reader is searching for the meaning he will maintain a flowing chain of ideas, synchronized with the flowing method of looking. Forced interpretation or active reading is difficult to master, which explains the initial drastic drop in comprehension.

As he progresses, the "Z" increases in size until the whole paragraph is included. This eventually produces a reverse "S" pattern. The ultimate goal is to move the hand down the center of the page in a vertical straight line. Perhaps those Chinese characters should be recognized after all.



Speed reading has limitations--technical instructions, graphs, and charts still require slow methodical study. Its best application is fiction, current affairs and routine publications.

Finally, old habits return like weeds. Reversion to formal reading habits is a common result. I can learn you English, but you must practice.

Summary

This is an exposition of one method of teaching speed reading. It is not intended as a lesson or course.

While this article progressed from step to step rapidly, speed reading courses are of several weeks duration and usually require one or more hours practice per day. Most students commence the course at 250/300 WPM and complete it with 1500 WPM.

This article contains approximately 800 words, one minutes time for a speed reader, how much time did you waste?

COMMON COMPLICATIONS ASSOCIATED WITH MINOR ORAL SURGERY

Captain GS Zwicker, DDS



This article is intended to direct attention to the more common problems of minor oral surgery which face the general practitioner and to indicate the generally accepted methods of treatment.

Most dentists master the art of exodontia at least to their own satisfaction, and the majority are capable of removing teeth quite painlessly, nevertheless problems can arise before, during, or after surgery. Granted, these are problems which also face the most prominent men involved in oral surgery, but the general practitioner is more likely to feel slightly uneasy with apprehensive patients before or after an injection of local anesthetic, or feel inadequate when faced with post-operative bleeding, swelling, or intense pain.

As members of the health profession, dentists restore and maintain healthy conditions. Often, however, disease conditions overpower normal reparative processes and sound judgement and knowledge must be utilized in providing the patient with proper therapeutic care.

Pre-surgical complications^{1,2}

1. Infection

Faulty sterilizing procedures are seldom a source of complications since the advent of the disposable needle. However, in the dental office where these needles are not used, such things as serum hepatitis, broken needles due to brittleness following repeated boilings, and pain associated with chemical deposits on the needles from sterilizing solutions are sometimes encountered.

2. Injection Technique

Perhaps the most prevalent problem results from careless and sloppy injection techniques. Patients very often report that the pain of the needle penetration was negligible but that the injection of the solution was uncomfortable. Painless injections are almost inevitable if the injection site is properly prepared by wiping the area clean with a sterile gauze pad and applying a mild antiseptic followed by a quick and deliberate insertion and slow administration of the drug.

3. Inflammation

It is known that local anesthesia is difficult to obtain in the presence of inflammation. This is explained on the basis of H^+ ion concentration or pH^3 . Normal tissue has a pH of 7.2., but to attain a level of 5.35, at which local anesthesia is optimal, manufacturers adjust the pH of local anesthetics to 3.5. However, in an area of inflammation, the pH is 4.5, a reading already lower than the optimal value of 5.3, and therefore total anesthesia is not likely, at least with infiltration techniques. Inflammation is a very real process and it results when cells are damaged, such as by very rapid administration of the anesthetic solution. In other words, slow injections usually produce better anesthesia.

4. Anatomy

Inadequate knowledge of the anatomical relationships of the trigeminal nerve can also lead to faulty anesthesia. With minor exceptions, landmarks hold true and proper injection sites are easily found. Accessory nerve distribution⁴ can lead to problems, ie, a superficial branch from the cervical plexus, the transverse cervical, can innervate the area of the mandibular bicuspid. The problem here is overcome by an awareness of the nerve distribution.

5. Trismus

The most common source of pain is that of trismus, usually encountered following inferior alveolar blocks whereby the needle either penetrates the median pterygoid muscle or the deep tendon of the temporalis muscle. Paraesthesia and neuritis are also quite common, especially in the lingual nerve. This can be avoided by maintaining the path of insertion at a proper level and using proper medial and lateral landmarks.

6. Intravenous Injection

The use of aspirating syringes has led to the infrequency of hematomas and intravascular injections. The latter can lead to quite severe convulsive attacks, due to rapid absorption of the drug. Should this happen, maintenance of an airway and the administration of oxygen will usually suffice. The administration of drugs in severe cases of drug toxicity - that is short acting barbituates in small (50 mg) incremental doses intravenously or mild stimulants such as caffeine benzoate - depends on the type of anesthetic used. The benzoates are Central Nervous System stimulants while the aniline derivatives are CNS depressants.

7. Adverse reactions

Psychic reactions are quite common, but syncope is easily treated, using ammonium chloride inhalants and by elevation of the extremities. However, we must be able to differentiate simple shock from cardiovascular, cerebrovascular and respiratory problems. Extremely apprehensive patients should be detected, and premedicated with 1.5 - 3 grains of sodium pentobarbital (Nembutal) or sodium secenal, 30 minutes pre-operatively. Allergic reactions, although extremely uncommon, are possible and if suspected, pertinent sensitivity tests should be performed on mucous membrane. Should an unsuspected reaction be encountered, administration of oxygen followed by a proper drug may be necessary. Adrenaline ($\frac{1}{2}$ - 1cc of 1/1000 solution IV) or a substitute such as Solu-Cortef (100 - 300 mg IV) are the drugs most commonly found in the dental office.

The use of a proper and thorough preanesthetic evaluation and patient history should uncover allergic tendencies and as well reveal such conditions as diabetes mellitus, cardiac disease, hemophilia, rheumatic fever, hyperthyroidism and renal impairment. However, these problems though important, are relatively uncommon and are not discussed in this paper.

Surgical Complications

A thorough knowledge of dental anatomy and an awareness of maxillary and mandibular bony architecture is necessary if extractions are to be uncomplicated⁵. It should be basic knowledge that most roots have a distal curvature, if a curvature exists; that maxillary first bicuspid usually have a lingual root; that mandibular premolars and most incisors can be rotated easily; and that mandibular molars are first luxated to the lingual and maxillary molars to the buccal, because of the lingual and buccal cortical plates respectively. Remembering this, root and bone fracture can generally be avoided.

Consideration of the mandibular canal and the maxillary sinus when attempting

to remove, by elevators, mandibular third molars and maxillary root tips is mandatory. Controlled tooth division and proper flap design must be utilized in cases of dilaceration, hypercementosis, ankylosis, crown loss and impactions. Healing is always more uneventful with properly positioned suture lines.

To carry out procedures which will aid in avoiding problems during the removal of teeth, the use of properly exposed radiographs and intelligent interpretation should not be overlooked. The use of right angle radiography⁶ is extremely essential in avoiding gross distortions of anatomical structures.

Post Surgical Complications

1. Dry Socket

Every dentist has observed abnormal post extraction healing and the condition of localized alveolar osteitis or dry socket^{7,8}.

A great number of etiologic agents has been suggested, but no single agent appears to be responsible. Something prevents the formation of granulation tissue and resultant organization and osteoplastic activity. Traumatic surgery and definite burnishing of the socket walls is easily detected, yet the majority of patients seem to return with dry sockets following a routine extraction after having left the office 24 - 48 hours previous maintaining pressure on a moistened cotton sponge which held in place a seemingly normal amount of blood.

Foreign body contamination, eg, bone fragments, calculus, and amalgam scraps have been suggested as possible etiologic agents. Improper sterilization of instruments is also possible, since many dentists simply place supposedly sterile instruments in a drawer, forgetting that while they are frantically selecting another instrument with their "bloody" hand, they are also contaminating every instrument in the drawer. Extra precautions should be taken for patients with a history of dry sockets to see that normal bleeding follows extraction. Patients should be given written instructions as to proper post-operative care. Those instructions suggested by the US Naval Dental School⁹ with minor modifications are quite complete and are as follows:

- a. Maintain firm biting pressure on the dressing for 30 min. Expect a small amount of bleeding for 24 hrs. If bleeding becomes excessive, return to the office.
- b. No smoking for 4 hrs. In order to promote healing a protective blood clot must form. Do not disturb this clot with strong mouthwashes (including alcohol), the tongue, sucking, food, etc.
- c. As the anesthetic wears off, control pain as directed, either with Aspirin or a prescribed drug. If throbbing pain develops within 24 - 48 hrs, return to the office.
- d. On the day following surgery, use saline rinses - add one tsp salt to a glass of very warm water - at least four times daily (after meals and before retiring).
- e. Some relief may be afforded by using an ice-pack 4 - 6 hrs following surgery, at 20 min intervals.

2. Post-operative Swelling

Post-operative swelling is generally a healthy response but if severe can present problems. Good oral physiotherapy will usually suffice, but occasionally such drugs as Orenzyme (Merrill-trypsin - which breaks down protein macromolecules which clog capillaries and lymphatics) or Statima (Frost-carbazochrome - prevents capillary hemorrhage) can be useful, following suggested doses.

Antibiotic therapy¹⁰ is often essential, the drug of choice being penicillin, with erythromycin and the tetracyclines as alternatives, should allergic reactions or resistant strains exist. The dosage is basically standard; using the metric system 250 mg are given four times daily; after meals and before retiring for 4-6 days. Definite instructions should accompany such drugs.

3. Post-operative Pain

Post-operative pain sometimes becomes unbearable and if so mild narcotics such as ASA, phenacetin and caffeine plus 15-30 mg codeine will be sufficient. However, if desired there are many non-narcotic preparations which can be used.

4. Post-operative Bleeding

Severe post-operative bleeding¹¹ is uncommon but in cases where flaps are indicated and not used and great gaping craters exist, massive clots may fill the entire oral cavity. Severing a major vessel, eg. inferior alveolar artery, can be embarrassing. Treatment consists of applying pressure, utilizing socket dressings and placement of tightly tied sutures.

The possibility of systemic problems such as hemophilia or the intake of anti-coagulants should not be overlooked and should be detected in the medical history of the patient.

Summary

The purpose of this article has simply been to outline and briefly discuss the more common problems which will face the general practitioner who carries out a minimal amount of oral surgery. Some problems encountered with the administration of the local anesthetic have been mentioned. Basic surgical and post-operative complications have also been outlined and a brief explanation of treatment has been mentioned. In most cases what has been written amounts to little more than basic common sense.

Bibliography

There are 11 references available on request.

Acknowledgement

The preceding article was prepared and presented orally at a recent Officers Clinical Course in Oral Surgery, held at CFB Borden under the direction of LCOL AG Andrews whose advice is warmly appreciated.

CANADIAN FORCES STAFF SCHOOL (CFSS)

Major FH Harreman, BSc, DDS

Introduction

The Staff School course is conducted in Toronto, at the Avenue Road site of the Canadian Forces College. Its big brother is the course conducted at the Canadian Forces Staff College at Armour Heights (Toronto) site of the Canadian Forces College. CFSS is an integrated school composed of staff and students from the land, sea, and



air environments. The course is designed to train junior officers by increasing their knowledge of "military office work", communication skills (oral and written), and to broaden their knowledge of the Forces. The end result is the development of an officer with an increased employment potential in the Canadian Armed Forces.

Fields of Study

The fields of study included in the Staff School syllabus are as follows:

a. Fields

- (1) Service Knowledge - the structure and operation of the Canadian organization for national defence.
- (2) Warfare - the military profession, elements of strategy, and military technology.
- (3) Geopolitics - the political, economic and social conditions which affect war and peace.
- (4) Military Executive Knowledge - those skills necessary to effectively utilize human, financial, and material resources (management).

Emphasis is placed upon the development of communicative skills, and appropriate knowledge of the Canadian Armed Forces.

Instruction

Instruction is given by formal lectures, visits, and work in syndicates. Lectures are presented by the Directing Staff, and by military and civilian guest lecturers with specialist knowledge. The syndicates are groups of six or seven officers with a member of the Directing Staff as a tutor. The fourteen-week course is divided into two syndicate periods, with a different group of students and a different tutor in the second phase. The syndicate periods provide the student with the opportunity of working with officers from environments other than his own. This can be a very rewarding experience and considerable benefit can be derived from it.

Instruction is primarily through direct participation, allowing the student to express himself orally or in writing, in a formal or informal manner. Throughout the duration of the course the participants must complete numerous assignments, related to a specific field of study, in a pre-determined format. All written assignments are dissected by the tutor - returned - artistically inscribed with prodigious red ink annotations. All extemporaneous oral assignments are analyzed with computer efficiency; the debriefings are artfully executed, and invariably poignant. Credit where credit is due, the tutors are excellent; they are knowledgeable individuals.

Author's Comments

It is an extremely humbling experience to be plucked from a familiar, comfortable environment, and thrust into a demanding military setting. I discovered to my amazement that there were officers in the Forces with intelligence, with university degrees, other than the dental officers. It became readily apparent that the professional officer is in an occupation demanding high standards of training and performance. As dentists we must strive to maintain our competence; the career officer must stay abreast of the latest developments in his specific field. The technical intricacies of modern warfare demand continued intensive education of the highest caliber. An inspection of the texts and periodicals that can be found in the Staff School and Staff College libraries, corroborates the complexity of military studies. The quantity and quality of the references in these libraries are astounding; I had no idea that so many excellent books are available to the student of military sciences. Professional military knowledge is indeed extensive, and it is high time that it is acknowledged.

The formal lectures were informative and usually interesting. The civilian lecturers were concerned mainly with Geopolitics, and their topics were related to Canadian Government, Canadian Economy and International Affairs. The lecturers on International Affairs were particularly enlightening; they acquainted us with the major political philosophies, and provided some of the rationale behind current international conflicts.

The military speakers were as competent as their civilian counterparts. The subject matter included organization and function of the Department of National Defence, staff procedures, administration, logistics, the military profession, elements of strategy, military technology, communications (listening, reading, writing, speaking, problem solving), management principles and leadership. Many of the lectures, particularly those relating to communication, were presented ably by the Directing Staff. The military guest lecturers were usually from CFHQ, and gave us the current policies from Ottawa. It is impossible to discuss in detail the contents of these lectures but suffice it to say that it provided the bulk of our work load, with numerous assignments to complement the lectures.

The most rewarding instruction at CFSS comes from the tutorials in syndicate. It is here that the individual temperament and personal experience of officers from different environments and trades are candidly expressed. The different attitudes displayed by members of my syndicate were most enjoyable; the directness and positive approach of a CF-104 "strike" pilot in contrast to the probing, questioning theorist (there's always one of these in a group), is wonderful to observe. The discussions invariably result in debate, produce contrasting opinions, and occasionally completely opposing views. It is interesting to note that even the most heated debates seldom resulted in animosity. The syndicate tutorials are a maturing experience, allowing the individual to criticize and be criticized.

I found the written assignments relating to routine staff duties time-consuming and physically taxing, and the infamous red ink comments appeared frequently on my assignments. This continual criticism can be extremely traumatic, and I blessed the day when one of my syndicate associates developed an enormous abscess which provided me with the opportunity of asserting my professional superiority. It seemed that the continual criticism would never end, and when the time came to present my ten minute extemporaneous speech on Chemical Warfare, I once again looked forward to a pleasant, informative debriefing stressing anew my usual inadequacies. Let it be known that these were perilous times.

Summary

The Staff School course provides students with an opportunity for concentrated study under competent Directing Staff. The experience gained is invaluable. It has made me appreciate the talent that is present in our Forces and understand the tremendous effort that goes into the training of a professional military officer. I consider it a privilege to have attended CFSS Course 3/68 and am grateful that the opportunity presented itself.

* Editor's Note

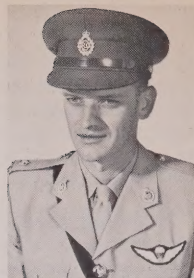
Major FH Harreman, Major PR McQueen and Lt RW Bowness are graduates of the Canadian Forces Staff School.

Notice

The seventh Annual RCDC Golf Tournament is scheduled to be held at the Circled Pine Golf Club at CFB Borden 5-6 Sep 69.

PROFILE OF CFB COLD LAKE

Major HW Brogan, BSc, DDS



This Air Defence Command base was the first flying station built after the Second World War and is one of the largest Canadian Forces bases in Canada. It is situated in Northeastern Alberta, 175 miles from Edmonton.

At CFB Cold Lake there are nearly 10,000 servicemen, civilians and dependants, making it one of the seven largest communities in Alberta. This large base is necessary to support its own operating units - 417 Squadron (CF-104's), 434 Squadron (CF-5's), 448 Test Squadron (AETE), 42 Radar Squadron, Canadian Forces Hospital, and The Satellite Tracking Unit.

Today the base offers some of the best accommodation and recreational facilities available to the armed forces anywhere. The winter is still long and cold, but its impact has been softened by the many winter activities pursued under excellent conditions, such as curling, skating, skiing, bowling and other less energetic but equally enjoyable occupations. The summer, though short, transforms the whole area into a vast resort that offers swimming, boating, camping, fishing, and all outdoor sports. In the fall, the hunting is excellent.

A very good highway links the base with Edmonton, from which other first class highways radiate south through Calgary to the United States; west to the mountain park resorts of Jasper and Banff, and then on to Vancouver and the British Columbia Coast; and east to Saskatchewan. The trip to Edmonton can be made in less than three hours by car. Other good all-weather gravel roads provide access to the local lakes and parks, and directly to points east from Cold Lake via Saskatchewan. These communication links, together with established bus and rail services to Edmonton, have effectively dispelled the sense of isolation that prevailed in earlier days.

The CFB Cold Lake community is a congenial and pleasant place in which to live and work. The base has some of the finest recreational facilities available in the Service and the only problem is trying to take advantage of them all. A few may be reluctant to come to Cold Lake because of its semi-isolated location; however, experience has proven that many are reluctant to leave.

The clinic staff with LCOL RB Jackson in charge, consists of seven dental officers and 14 auxiliary personnel with a total patient commitment in excess of 9500 servicemen, dependants and other civilians.

This clinic is one of the largest in the CFDS. The lab is currently undergoing expansion, and plans are being made to expand the treatment facilities by four units.

This clinic has the greatest number of parachutists of any in the CFDS. Since this is a flying base, it provides an area of common understanding. On occasion, it is subject to a heated conversation during Happy Hours. CPL Vasek, who is a sky-diver, was on TD when this photo was taken. The above personnel have amassed 113 jumps in Dakotas, Boxcars, Hercules and Helicopters.



Back row (L to R) - WO Neill; CWO Daw; CPL Gallagher
Front row (L to R) - MAJ Brogan; LCOL Jackson; CAPT Pankratz

During the recent Polar Carnival, the Base Commander gave permission for a beard growing contest. In excess of 700 beards of various descriptions provided some unlikely looking servicemen.



Standing (L to R) - MAJ Andrews; CPL Mehler, CPL Craig; WO McFadden; CWO Daw
Seated - LCOL Jackson who has just signed the Proclamation "that on Monday next ye shall all report clean shaven".

WO McFadden took third prize in the full beard category.

The RCDC News

SEVENTH ANNUAL RCDC BONSPIEL

Esprit de corps and extensive social gatherings were again evident during the Seventh Annual RCDC Bonspiel in CFB Borden with over 160 curlers and curling enthusiasts participating on 22-23 Feb 69.

A presentation dinner was held in Building T-70, after the Bonspiel. The prizes and trophies were presented after an excellent meal.

The event was considered an unqualified success thanks to the Chairmen Majors JM Donely and H Marion, supported by Captains Cartwright and Peebles, Sergeants Gardner and Vandervaart, CPL Clint, MWO Krauskopf, CFMSTC (Umpire) and Mrs PS Sills and wives for lending a female touch in decorating for the social functions.

An innovation was the highly personalized service of CFDSS personnel behind the bar which it is hoped was enjoyed by all in the form of generous dispensations. Any suggestions regarding this keep-it-in-the-family service will be gladly received by the CFDSS Associate Editor.



Top Left - MWO Fraser's rink from CFB Petawawa again won the Wansbrough Trophy. BRIG EM Wansbrough (ret'd) presents the Trophy to MWO Fraser JA and the members of his rink (L to R) WO RJ Goodwin, CAPT CW Kearns and MAJ GIJ Bisaillon.

Top Right - BRIG EM Wansbrough presents prize to the rink from CFB Toronto skipped by MAJ IA MacDonald, runner-up in "A" Event. L to R CAPT VO Bergland, MAJ CJ Sivell and COL RHG Cunningham.

Bottom Left - "B" Event - WO PD Peterson's rink from CFB ST Jean successfully defended the RCDC(R) Officers' Trophy against a strong Medical rink from CFB Borden skipped by MAJ T Everson. BGEN BP Kearney, DGDS, presents the Trophy to the winners (L to R) WO PD Peterson, LT R Savoie, MAJ JJB Houde and CAPT JH Nadeau.

Bottom Right - "C" Event - CPL John Clint skipped the CFDSS Borden rink winning the "C" Event for the WOs and Sr NCOs Trophy. BGEN BP Kearney, DGDS, makes the presentation to (L to R) CPL J Clint, MWO EE Mazerall, PTE A Lambert, and MWO J Sadler.



Top Left

- MAJ MacDonald shows good form in the hack

Top Right

- Teachers and students study the problem

Center Left

- The eleventh end

Center Right

- Shilo vs London

Bottom

- BGEN Kearney presents special trophy donated by CFDS to the U of T DOTP team



CAPT John B Ferris, Executive Officer, greets LCOL EE Floto, Army Dental Corps, and MAJ NH Andrews, Royal Canadian Dental Corps, when they arrived for a tour of the Naval Dental School with a group of 16 students in the Advanced Theory and Science of Dental Practice Course, at the Army Medical Center, on March 28, 1969.

Division News

The Director General of Dental Services, Brigadier-General BP Kearney, presented a paper to the Surgeon General's Symposium at the 10th Annual CFMS Clinical Conference in Kingston, Ont, 24-25 Apr 1969. This paper is reproduced elsewhere in this edition.

MAJ JVP Chatwin visited clinics in Manitoba and Alberta to discuss and demonstrate aspects of the RCDC preventive dentistry programme.

SGT MAJ Eady attended a Computer Programmer Course at CFMS LaSalle 24 Mar to 30 May 69. Norm took the Introductory Machine Programmers course at his own expense last winter and should do well on the present assignment.

LCOL G MacDougall brought his high school French up to date with a winter course at a local high school and then attended a partial immersion course at the Centre Linguistic, Hull, PQ, 17 Mar to 3 Apr.

Curling teams were active in the Division this year. Brig-Gen Kearney skipped his rink to the Presidents Trophy at the Navy Curling Club. WO Sullivan with WO James, and SGT Dumas won the B event of the SGTs Mess 'spiel and this team with LCOL Richardson skipping, was runner-up in the CFHQ Windup Bonspiel. At this time of year Tom assures us the competition is still pretty tough.

CFDSS

by

MWO HEG Franzgrote

Visits

A Sunday excursion to visit the Dental Faculty, University of Toronto was enjoyed by the Pay Level 6 and 7 Therapist courses on 2 Feb with MAJ AG Taylor as the conducting officer.

The pretty dental hygienist students and the CFDSS candidates had no difficulty in establishing contact to discuss mutual interests, their work of course.

It was learned that the teaching of certain orthodontic procedures such as the taking of impressions, the shaping and inserting of orthodontic bands and the soldering of corrective wiring is now part of that dental school's hygienist training program. Another point of interest was the possible future acceptance of male students into the hygienist course.

All CFDSS students and staff members taking part in the visit had the opportunity to meet COL CE Purdy, now Professor Purdy, and LCOL WR Thompson now undertaking post-graduate surgery studies.

COL IG Craigie attended the Training Command conference in Winnipeg 20-25 Jan 69 and everyone is wondering where, between Winnipeg and Borden, one can pick up such a convincing tan?

CPL Norm Hope Top Student on Sr NCO Course



Norm arrived back at the CFDS on Monday with a smile on his face and a plaque in his hand. Norm had just finished first on his Sr NCO Course, held from 12 Feb to 11 Mar 69, at CFB Chilliwack, BC. The month long course concentrated on problem solving, field exercises, map using, military law and instructional training. Norm, who just recently received his CD, also had the privilege of being parade commander on the graduation parade.

New Facilities

A new training facility has been built under the direction of CAPT D Cartwright and MWO WD Morris which will provide a modern layout and classroom for the new DENT course starting at the CFDS in April.

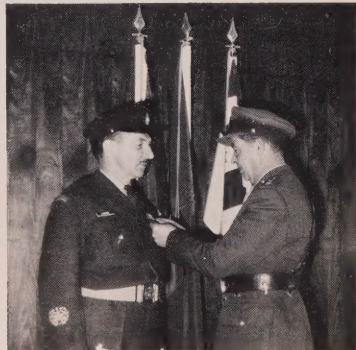
Preventive Dentistry

A continuous preventive dentistry program is being conducted by MWOs GE Bradley and HEG Franzgrote; WOs H Wagstaff and M MacDonald under direction of MAJ SW Muller. The program uses the self-preparation technique including Acidulated Phosphate Fluoride application, bitewing radiographs, a film presentation, classroom oral hygiene instruction and a dental examination.

Dental Therapists on the PL 6 course participated in these dental public health activities thus gaining first hand experience in the newer preventive dentistry techniques.

Decoration

MWO KE Laurence being presented the clasp to the CD by COL LG Craigie for 22 years of faithful service.



Promotions

SGT Hans Kalmet was promoted to that rank 1 Feb 69. He has been employed as assistant to the Chief Instructor, LCOL Andrews, and is much sought after for his knowledge and handling of training aids. Hans was born in Barnu, Estonia, is married and has three children. He began his military career with the RCASC in 1958 and has served in Egypt and CFB Borden.

SGT Leverne Hatcher received the good news of his promotion effective 1 Mar 69. He joined the RCHA in 1955, transferred to the RCDC in 1964 and has seen service in Shilo, Manitoba; Debert, NS; Gagetown, NB; and is now employed as Clinical Dental Assistant and Instructor. Leverne is married, has two children and resides in PMQs at CFB Borden.

Farewell Parties

CAPT V Rausch received a hearty farewell party from all ranks of CFDS on 21 Mar 69. He has become well known throughout the CFDS and with many civilian professional organizations for his capabilities in co-operative deep suggestive therapy and hypnodontics. Best wishes for the future in his civilian practice in Waterloo, Ont go with Dr Rausch.

CPL RM Clarke and CPL DG Hewitt were given a draft-beer-barrel party farewell with useful household items as gifts by the officers and men on School staff. CPL Clarke moves on to Mont Apica, and CPL Hewitt chose to retire at this tender age.

Sports

CPL JA Clint as Skip, MWO EE Mazerall Vice, CAPT NS Misura, Second and SGT B Vandervaat lead contributed a rink to the second annual CFMTS Bonspiel commencing on Friday 14 Feb and consequently won the "A" Event: Colonel Ash Kerr Trophy. They are still grinning and chuckling over their highly respected achievement, but found it a little tougher in the Dental Bonspiel a week later.

CAPT DA Graham, MAJ Bob Bryant (ret'd), CAPT NS Misura and SGT B Vandervaat were the winners of the Melchers Invitational Bonspiel, 18 Jan 69, at Base Borden.

Travel

CAPT DN Pettigrew and his family returned safely from a vacation trip to the Soest area where he visited his parents.

SGT ADT Gardner travelled with the CFB Borden Sergeants' Mess Hockey Team from Trenton to Lahr 24 Mar 69 to assist in the administration while the Borden team played against the Canadian Sergeants teams in Europe. Anybody looking for an excuse to get a free trip overseas? This could be it.

1 Dent Unit

Special Events

The Dental officers of the Ottawa area turned out in full force to attend the Ottawa Dental Society meeting held on 20 Jan in the Chateau Laurier Hotel. The guest clinician was LCOL PS Sills who discussed Complete Denture Prosthesis.

On January 8 MAJ J Turcotte addressed the Ontario Dental Nurses and Assistants Association. The topic, The Role of the Dental Assistant in Surgery, was well illustrated with over 100 slides.

Sports

Dr Grant calculated that, during the RCDC Bonspiel, he curled 100 rocks of approximately 40 lbs each, for a grand total of two tons moved over a distance of 160 feet. He said this was the ONLY reason he was stiff.

11 Dent Unit

by MWO RD McHugh

Training

Annual winter training was held at Camp Wainwright 20 Jan to 25 Feb 69. CAPT Berezon and CPL Hughes were the first dental team in, arriving 23 Jan. CAPT Berezon reports they had a record 62 degrees below zero and just about everything froze, eg. vehicles, supplies, and medicine. CAPT Brothers and CPL Mackie arrived on 8 Feb and finished the exercise. They too, suffered through the extreme weather conditions.

Major John Eadon, Esquimalt Detachment, is attending a course in Basic Dental Science at the Royal College of Surgeons, London, England; from 14 Apr to 6 Jun 69. MAJ Eadon has combined his 68/69 and 69/70 annual leave for this purpose and is attending at his own expense.

Clinical Demonstration - CFB Cold Lake



LCOL AG Andrews, assisted by CPL Koch, demonstrating the removal of a palatal torus. The Chief Instructor of the CFDS visited Cold Lake from 25-27 Feb to conduct an Oral Surgery Clinic. With Cold Lake's wide choice of patients, a full range of clinical and hospital Oral Surgery was demonstrated.

Special Events

RDCD personnel in the Victoria area bade farewell to SGT AJC Gagnon on his retirement from the Corps at a "get-together" in the Esquimalt Legion on Friday Feb 28, 1969. A Sandwich Tray was presented to him as a reminder of his days in the Service.

At this Unit's 3rd annual bonspiel SGT Yvonne Dundas of the Griesbach Detachment was presented with wine glasses and a decanter prior to her retirement from the Service. Yvonne has spent 15 years with the Service. Her ready wit and dry sense of humour will be sorely missed. Yvonne and her husband, SGT Al Dundas of the Special Investigation Branch (Air Force) who is being released to pension will shortly take over their 'Ponderosa' out in the Okanagan country and cultivate their vast orchard holdings.

CAPT Tom Erskine Cdn Services College Dental Detachment, finally finished his private pilot's course after a 15 year interruption.

Ian Hunter, who retired from the Corps in 1966 in Edmonton where he served as Unit Quartermaster, paid a visit to this location in March. He has been employed

as a Supervisory Security Officer for a mining company in the far North and recently accepted a similiar position at Simon Fraser University.

Sports

The 3rd annual 11 Dental Unit bonspiel was held the week-end of 11-12 Apr 69. Teams were entered from Cold Lake, Calgary and Edmonton. The Garth C Evans Trophy for the "A" event was won this year by a team skipped by LCOL John Butler from Calgary. John had CAPT Roy Fearon at third, Roy's wife, Lynn, at second and Mary Sisson as lead. The strong Univ of Alta rink composed of 2LTs Graham, Haines, Charlebois and Bradley made John and his rink go an extra end before winning.

The "B" event, playing for the NCO's trophy, recently donated by Dr LW Singer, an Edmonton Optometrist, was won by a rink skipped by young CPL Paul Mehler and his Cold Lake crew. LCOL Bill Jackson, CAPT Hank Pankratz and SGT (AF)(W) Donna Hollins made up the rest of his very fine rink. This proved to be a no-contest affair won after five ends by a score of 10-0. The opposition, if it must be called that, was provided by a Headquarters rink composed of SGT Dick Walker, COL Garth Evans, MWO Ray McHugh and LCOL Don Hiller. "What a bunch of bums!" was heard from the "Gallery Gods".

A team from the Dental Detachment Cold Lake skipped by WO Gerry Shand with MAJ HW Brogan, CAPT Andrews and WO Earle McFadden captured the "B" Event trophy in the Cold Lake Medical Dental Bonspiel March 14-15, 1969.

SGT Marckwort, Edmonton Detachment, spent a busy winter as a ski instructor with the Airborne Regiment. SGT Marckwort is an accomplished skier and his services are much in demand. Helmut is anxious to try the Alps in Switzerland again, real soon!

CAPT MG McRae Comox Detachment won the Zone 1 Men's Singles Badminton Championship held at CFB Comox. He proceeded to CFB Trenton with the team from Comox for the Canadian Forces finals. Competition proved to be a little stiffer here but CAPT McRae went to the semi-finals in the singles and doubles before being defeated.



LCOL Andrews departing CFB Cold Lake via the "Teensy-Weensy" Airline. Owner/Pilot/Mechanic is MAJ Brian Andrews. As Cold Lake is a bit off the beaten track, LCOL Andrews took the scenic route, via Cessna 140, to Edmonton to catch the eastbound Yukon.

Leave

CPL Roy Tallack, Griesbach Detachment, Edmonton, took advantage of an Indulgence Flight to the United Kingdom aboard an RAF Britannia. Roy was to have left Edmonton on 27 Jan 69 but due to temperatures of 20 to 30 degrees below zero the Britannia was unable to get airborne until 3 Feb 69. The flight over carried only six passengers and Roy had ample room to stretch his long legs. Such was not the case on the way back and he ended up buying an Air Canada ticket.

LCOL and Mrs Hillier of the Edmonton Detachment boarded a charter flight in Toronto with relatives for a two-week holiday in the Canary Islands.

12 Dent Unit

Training

CAPT HM Amos, receiving certificate
with congratulations from CAPT Howard
B Marble, DC, USN, Head of the Oral
Surgery Department.



Honours and Awards

MAJ BA Gaudet was awarded the Canadian Forces Decoration 10 Sep 68. He has been trying ever since to obtain miniatures for his mess kit but apparently nobody has ever heard of a UNEF Medal. How they soon forget the veterans!

Sunny Vacations for Many Maritimers

In this part of "Canada" the winter weather of rain, fog, snow, freezing rain, then dreary "no weather days" finally drives people to the south for a look at some sunshine. Many members were fortunate in being able to journey to far off places either on duty or leave to reap a bit of "ole sol". The following left for such places as San Juan, Bermuda, Florida --- COL SG Bagnall, MAJ GT Crossman, CAPT JF Mullins, MAJ VM McMaster, CAPT ED Cragg, CPL P Maelde, CPL CJN Beauchamp, PTE JD Hopkins, Miss LJ Colter, Miss JF Loring. The real sad part of taking one of these trips is that eventually one must return to face the "Hard times in the Maritimes".

Sports

CAPT YJA Gagnon from Base Gagetown was a member of the team that represented 3 Combat Group at the Mobile Command Ski Meet at Valcartier from the 2nd to 8th of March. The team placed fifth out of eight and CAPT Gagnon had the second best overall time of his team.

MAJ RE Dyer has been very busy this last month - he is the President of the Officers Mixed Bowling League at Base Shearwater - they are wrapping up a very successful season.

CAPT OG LePage and WO JE Clarke were participants in the Zone 8 Curling play-downs. Their team was runner-up in the "B" Division.

SGT J Kay skipped his rink to the Championship of the SGTs' Mess Bonspiel at CFB Summerside held during the month of March.

13 Dent Unit

Duty Trips and Visits

SGT DJ Davies from CFH Kingston and SGT EPH Sprathoff from CFB Downsview assisted with the officers clinical complete dentures course 8 Apr to 23 Apr at the CFDS School at CFB Borden.

The real travellers for the unit were CAPT GW Kearns and PTE JG Allain from CFB Petawawa who took part in exercise "Nimrod Caper" from 1 Mar to 25 Mar 69. This exercise took place in Jamaica. It was reached by Air Canada from CFB Petawawa to London, Ontario and by service Yukon flight from London, Ontario to Palisadoes International Airport in Kingston, Jamaica. From Palisadoes travel was by service Buffalo aircraft to the exercise area near the northern luxury resort of Port Antonio. The requirement for emergency dental treatment for service personnel was small and CAPT Kearns also did some emergency dental work for a few local natives. It is reported that our representatives returned well tanned but with battle scars lacking.

Mickey Mouse Gets To Pay Level 7

Gremlins, ghosts or shadows of the Keystone Kops? Whatever they were, the unit at Camp Picton was having a hard time. MWO Hopkins had to rectify the same malfunction on three separate occasions. Two visits were within three days. He finally solved the problem by sowing a little seed. In this instance--mouse seed. No, he isn't trying to grow mice. Apparently "Mickey" liked the taste of the plastic air hose in the base of the airotor hose assembly. At any rate he selected it to do his chewing on until the more enticing seed was provided--much to his sorrow, no doubt. MWO Hopkins now spends his time more productively than "big game" hunting.

Hospital

WO RJ Goodwin was admitted to NDMC Ottawa with a badly fractured mandible on 9 Mar 69. This occurred while 'Bob' was refereeing a hockey game at Deep River. His holiday will last about six weeks. Who says they aren't tough in the 'sticks'? With referees so vulnerable, we wonder how the players contrive to survive.

14 Dent Unit

by WO WA Jackson

Duty Trips & Visits

We have duty trips and visits coming out our ears so to speak; since the last edition of the Quarterly it would probably be more news-worthy to mention those who have not taken a trip. (pun intended) But because of our high morale and esprit-de-corps LCOL Butcher has not received a single complaint, possibly due to his absence while on a world tour for a month.

Farewell Shirley Bolger (nee Morken)

In this service world people come and people go and we become rather used to the flow of personnel. Somehow this rather callous approach breaks down with the loss of a civilian whom we looked upon as something of a permanent fixture, especially when this civilian was a pillar of efficiency and dependability in the Fort Osborne clinic for the past 6 years.

Therefore, despite the apparent joy and laughter that prevailed throughout the farewell party held for Shirley on Friday 28 Feb at No 1 Clinic, CFB Winnipeg, there was an undertone of sadness among the older clinic members to see this model-of-a-dental-nurse leaving us. However, we have thrown off our mantle of selfish gloom and in presenting Shirley with an electric carving knife, CAPT Blasetti expressed all our feelings in wishing Shirley and her husband, Vern, joy & success in their new home in Victoria. The lucky guy.

Sports

HQ Training Command is sponsoring a Jog-a-thon with the aim of promoting physical fitness through a daily programme of jogging. The bait being dangled before everyone is a gold medal and a challenge that only nine out of the almost 3000 troops on the base could successfully complete 200 miles over a 3-month period 1 Mar to 31 May 69. A silver and bronze medal is also being offered for those attaining 150 or 125 miles. CAPT "Sonic Boom" Blasetti, WO "Jet" Jackson and WO "Rush" Roberts have all attained 100 plus miles. Please send all unwanted jogged milage to 14 Dental Unit, we, puff, need them!

Congratulations to CAPT Boucher who was voted the "most valuable" hockey player in the Armed Forces Western Division Playdowns.

Dental Floss

Overheard PTE Kurbis say just after developing the 4th full mouth survey one morning. "If I spend anymore time in that darkroom I'm going to turn into a mushroom!"

15 Dent Unit

Accommodation

QM 15 Dental Unit has moved from CFB St Jean to the heart of the Bomb Centre of Canada, to settle in Building 13 at Longue Pointe. LT Savoie reports that everything is pretty well in place and that he may issue roller skates to his staff to speed up production in this large building.

Leave

MAJ JFA Marcil had the good fortune to spend three weeks Annual Leave in Fort Lauderdale, Florida. Since MAJ Marcil is an ardent golfer, he spent much of his time on the golf course, and other Corps golfers may be interested to know he found Canadian golf courses every bit as good as those in Florida.

COL Cornish has just returned from a three week camera tour of Africa, where he found that animals, small or large, have some very interesting characteristics, such as the elephant who likes, would you believe it, Mint Juleps.

Sports

Since the clinic staff of CFB St Hubert has taken up skiing on sports afternoons, it seems that every week someone turns up on the injured list, CPL RK Delmage a sprained foot, SGT JF Hill a badly bruised hip, MAJ JCRR Roy a dislocated shoulder.

4 Fd Dent Coy

Professional Meeting

A Professional Dental Officers Meeting was held on 21 Jan 69. A total of 22 Dental Officers attended which included representatives from the British, American and Canadian Forces. Brigadier-General Green, Chief of Dental Services BAOR, along with COL Mackie and LCOL Pearson, RADC, were in attendance.

MAJ Chatwin, Preventive Dentistry Officer, Division of Dental Services, addressed the Professional Dental Officers Meeting, on the subject of Preventive Dentistry

in a manner which stimulated an enthusiastic response from the entire audience. During the cocktail hour that followed, the philosophy and chemistry of Preventive Dentistry was vigorously and heatedly pursued by our visitors. The conversational flavour of stannous fluoride was replaced by a pleasant dinner at 4 CMBG Officers Mess.



Left - Major Chatwin addressing dental officers.

Right - Major JVP Chatwin, DGDS/CFHQ; LCOL Pearson, RADC; BRIG Green, RADC; COL Mackie, RADC; BGEN Gardner, Comd 4 CMBG; LCOL GE Windsor, CO, 4 Fd Dent Coy.

Marriage

CAPT George Nye was married to Elaine Astrid Ross in the military chapel in Delinghafen, Germany on 14 Mar 69. CAPT H Wood was best man and CAPT Petrie was in the line with his sword raised. Other officers of 4 Fd Coy were in attendance with their wives. Following the ceremony a reception was held in LdSH (RC) Officers Mess. After the usual round of toasts, congratulations and best wishes, the bride and groom disappeared for a 2-week holiday on the sunny island of Djerba.

Leave

CAPT Griesbach travelled to Cyprus with his family via service aircraft in March. Having served with the UN in Cyprus, he suffered a spasm of nostalgia on seeing the deserted old dental clinic in Lizard Flats and conversely turned green with envy when he saw the new clinic at Camp Maple Leaf.

Sports

Seventeen members of 4 Fd Dent Coy travelled to Zweibrucken 27 Feb 69 to compete in the annual RCDC Bonspiel (Europe). This was the usual gathering filled with good fellowship and more than enough curling to justify the trip. 4 Field lost the bonspiel but like someone, somewhere, sometime threatened to return.

35 Fd Dent Unit

by SGT DT Moran

Sports

The sporting highlight of last quarter was the Annual Curling Bonspiel between 4 Fd Dent Coy and 35 Fd Dent Unit. To provide a little background on this event, as far as can be determined, the first Bonspiel was held in 1961. A suitable trophy was produced consisting of a horse cut in half. The winning team would receive the Horse's Head and the losing team would of course be the proud owners of the Horse's Hind End. This is to be an annual event and has been carried on over the years with the odd exception when "Operational Commitments" have cropped up to prevent the gathering of the clan. Operational Commitment is defined as "The H___ with you Leon - I have the Head and do not intend to loose it".

Despite the fact that the 35 Fd Dent Unit had very little ice time to practice

their skills, their superior curling carried the day and the Horse's Head was returned to 35 Fd Dent Unit and the Hind End is once again at home with 4 Fd Dent Coy. It is assumed that the latter is prominently displayed in LCOL George Windsor's Office at 4 Fd since the Head has a place of honour in 35 FDU HQ.



CO 35 Fd Dent Unit LCOL DH Protheroe (Top Left) is presenting the Hind End of the horse trophy to CO 4 Fd Dent Coy LCOL G Windsor

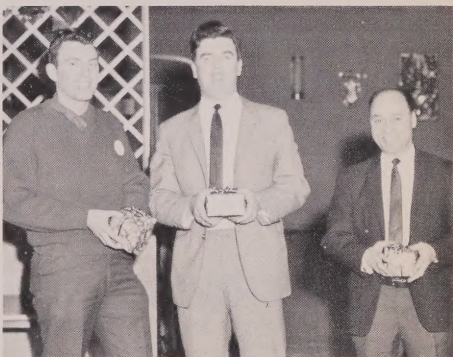
"The Winning Team" (Top Right)

L to R - CAPT Brian Weeks (Skip), Dr Ivor Hamilton, PTE Marjorie Kent and CPL Dick Gratton



"The Runners-Up" (Bottom Right)

L to R - MAJ Morley Deyette, CPL C Arnold and WO Jim Minnelli.



CAPT Brian Weeks at 3 Wing skipped his team into 4th place in "B" event and walked off with the Canadian Club Trophy.

MAJ Cliff (Mace the Ace) Mason was coaxed out of retirement this winter and put on the blades once again to help out the Lahr Officers' Mess Hockey Team. He managed to end up tied for top scorer in the league and then was out of action for the play-offs with a banged up knee. Two other officers of the Unit, CAPT Bob (Flash) Fortier and LT Paul (Boom Boom) Carrier were also members of the team which ended up first in the league standings but were beaten out by the Corporals in the finals.

Leave

It is that time of the year again when everyone is trying to use up the remaining few days of annual leave. As usual during leave periods 35 Fd Dent Unit has personnel scattered all over Europe. Italy seems to be the big attraction this time and heading the list to sunny Italy was LCOL DH Protheroe. Other members of the Unit holidaying in Italy were MAJ Pierre Legendre, PTE Marjorie Kent and WO Bob Lowery. CPL Norma Boles went to Spain and Gibraltar, CAPT Jim Stansfield to Spain and Tangiers, Morocco, MWO Harold Kirby to Vienna, SGT Denny Hughes crossed the Channel to England, PTE Kelly MacEllistrum to Holland, MAJ Cliff Mason and CAPT Bill MacKenzie tried the ski slopes at Tyrol, Austria and CAPT Bob Fortier took an extended trip to France, Spain, and Morocco. MAJ Yvon Cyrenne and CAPT Brian Weeks went on a tour to Berlin which was organized by the NATO Junior Officers Club. Apparently Yvon found the Berlin Wall depressing and decided he needed a rest so he went to Nice, France - from the Berlin Wall to bikinis in one short hop! CAPT Bob Cooper split his leave between Paris and Cyprus.

Professional Training

US Naval Dental School - Bethesda, Maryland, USA

CAPT DG Jones - Periodontology - 21 Apr-6 Jun 69
CAPT CW Kearns - Periodontology - 21 Apr-25 Apr 69

ENT Air Force Base - Colorado Springs, Colorado, USA

CAPT FH Harreman - Oral Surgery - 17-28 Mar 69

Doctors Hospital - Toronto, Ontario

CAPT W Budzinski - Residency in Oral Surgery - 14 Apr-6 Jun 69

Canadian Forces Dental Service School, CFB Borden

Complete Dentures - 10 Apr-23 Apr 69

Majors TD Cobb and DE McDermott; Cpts KPH Buchholz, JHJC Nadeau, DNH Charles

Training

Canadian Forces Dental Service School, CFB Borden

Dental Assistant Pay Level 3 - 17 Mar-16 May 69

SGT (AF) Smith CW (CFDSS); CPL (AF)(W) Grandchamp MC (11 Unit), CPL (AF)(W) Nowlan SJ (12 Unit), CPL (A) Jeneveaux WK (12 Unit), PTE (N)(W) Latimer HVP (12 Unit), PTE (A) Kurbis DP (14 Unit)

Dental Equipment Maintenance Technician Pay Level 4 - 14 Apr-26 Sep 69

CPLs Shave CC (15 Unit), Wilson AM (15 Unit), Timleck LJ (12 Unit) and Kallman LJ (CFDSS)

Senior NCO Course - CFB Chilliwack - 19 Mar-18 Apr 69

CPLs Albertson GG (CFDSS), Delmage RK (15 Unit), Girdlestone TV (35 FDU), Labrosse JGJ (4FD), Larouche JA (15 Unit), MacGillivray JH (11 Unit), O'Dell RG (12 Unit) Smith DS (12 Unit), Violette JLA (13 Unit)

Junior NCO Course - CFB Shilo - 24 Mar-13 May 69

PTs Cooper TJM (14 Unit), Van Hemert J (11 Unit)

Training with Industry

Ceramco Porcelain to Gold Fabrication - JF Jelenko & Co Inc, New Rochelle, NY
10-21 Mar 69

SGT Peterson N (14 Unit), SGT Todd RE (1 Unit)

Ticonium Equipment Course - Albany, NY

MWO Stewart RG (14 Unit), MWO Hopkins JD (12 Unit); CPL Cliche JPGA (15 Unit)

Ritter Equipment Company, Rochester, NY - 10-14 Mar 69

CPL Schultz EJ (11 Unit), CPL Clint JE (CFDSS)

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

Mrs W Smith (Gypsumville), Mrs P Labreque (4 Fd), Miss F Beaulieu (Winnipeg), Miss Claire Morrisette (Valcartier), Mr S Bingham (DGDS)

Promotions

To MAJ - RB Andrews (11 Unit), JAA Boucher (14 Unit), FH Harreman (14 Unit), DG Jones (14 Unit).
 To CAPT - TM Jackson (15 Unit).
 To MWO - MO McDonald (CFDSS), RJ Goodwin (13 Unit).
 To SGT - Hatcher LR (CFDSS), Kalmet H (CFDSS), Olinik MG (15 Unit), Todd RE (1 Unit), Wadden GM (1 DED), Bosh P (11 Unit), LaPointe MT (11 Unit).
 To CPL - Cloutier JRA (15 Unit), Desgroseilliers JRAR (12 Unit).

Retirements and Releases

MAJ PL Falkner (13 Unit), MAJ Y Kamachi (13 Unit); CAPT EI Gerard (11 Unit), CAPT V Rausch (CFDSS), CAPT RE Warren (13 Unit); MWO CS Madge (11 Unit); SGT Chase WF (12 Unit), SGT Gagnon AJC (11 Unit), SGT (AF)(W) Y Dundas (11 Unit); CPL (AF)(W) Mitrikas JE (15 Unit), CPL Heintz A (11 Unit), CPL Strasdin JA (1 DED); PTE (AF)(W) Morton GD (35 FDU), PTE (AF)(W) McCaffery BM (13 Unit); Miss S Morken (Winnipeg); Mrs J Bailey (4 Fd)

Postings

Name	From	To
MAJ VM McMaster	Cape Scott	Bonaventure
CAPT DNH Charles	CFB Picton	CFDSS
CAPT ED Cragg	Bonaventure	Shearwater
CAPT J Dion	Cyprus	15 Unit (Quebec City)
CAPT GC Post	CFB Trenton	CFB North Bay
CAPT Z Tuckums	1 Unit	Cyprus
SGT LI MacLean	11 Unit	4 Fd (Ft York)
CPL GG Albertson	4 Fd Dent Coy	CFDSS
CPL JAN Audet	4 Fd Dent Coy	15 Unit (CMR)
CPL CJN Beauchamp	Bonaventure	Dockyard
CPL WD Buxton	12 Unit	SHAPE Belgium
CPL GN Challenger	14 Unit	Cyprus
CPL RM Clarke	CFDSS	15 Unit (Mont Apica)
CPL JRAR Desgroseilliers	12 Unit	Cyprus
CPL RM Haiplik	13 Unit	4 Fd Dent Coy
CPL P Maelde	Bonaventure	Stadacona
CPL HJ MacGillivray	4 Fd Dent Coy	11 Unit (Work Pt)
CPL MJC Michiels	13 Unit	4 Fd (Ft St Louis)
CPL DS Smith	4 Fd Dent Coy	12 Unit (Halifax)
PTE GW Bowman	12 Unit	4 Fd (Ft McLeod)
PTE RD Calnen	Stadacona	Bonaventure
PTE JD Hopkins	Cape Scott	Gagetown
PTE GR Lamontagne	1 Unit	4 Fd (Ft Prince of Wales)

Vital Statistics

Marriages

MAJ RM MacDonald to Miss Jacqueline Clare Ryan; CAPT GR Nye to Miss Elaine Astrid Ross; CPL (AF)(W) Gruner I to Mr William Grant Linton; Miss Shirley Morken to Mr Vern Bolger

Births

Daughters - MAJ & Mrs FC Arpin; CAPT & Mrs JLAR Boucier, CAPT & Mrs EL MacInnis (twins); LT & Mrs RW Bowness; CPL & Mrs RG Duffield (CFDSS), CPL & Mrs GG Hildebrandt

Sons

CAPT & Mrs CJ Sharpe; CPL & Mrs A Jack

The

ROYAL CANADIAN DENTAL CORPS

Quarterly

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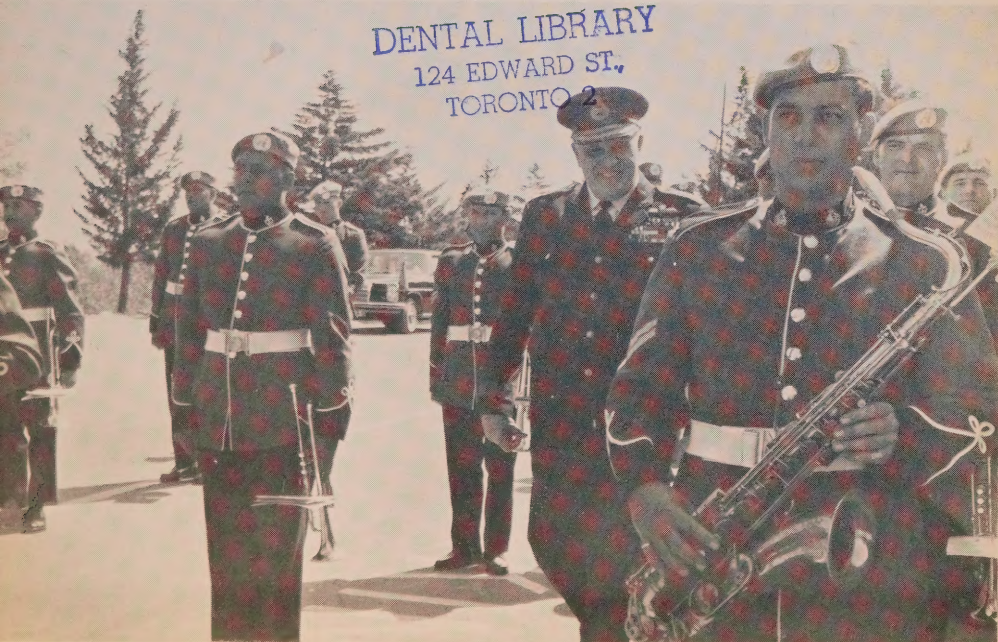


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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney, MBE, CD, QHDS

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

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Cover Photograph

CPL GN Challenger RCDC displays his military and musical talent as General JW Allard, Chief of the Defence Staff inspects Canadian Forces personnel in Cyprus.

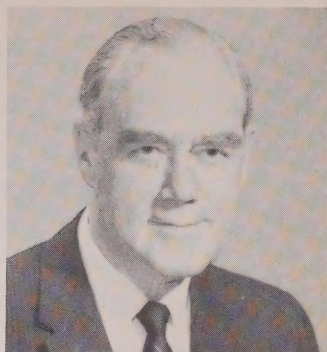
ORAL DIAGNOSIS AND RADIOGRAPHY

HR MacLean, DDS, FICD, FACD

Dean, Faculty of Dentistry
University of Alberta

Consultant in Oral Diagnosis
and Roentgenology to the
Royal Canadian Dental Corps

President, Canadian Dental Association



In the current practice of dentistry probably the two most neglected areas are history taking and quality oral radiographs. It is not so much the fact that these areas were deficient in the undergraduate curriculum as that they drift into a de-emphasized category in the office of the busy practitioner.

Someone once said "never treat a stranger" and this is just another way of stressing the fact that a history should always be obtained. There are many types of questionnaires that the patient can partially or fully complete by check marks. In some offices the dentist prefers to discuss the history directly with the patient. In my opinion the first method is a time saver and a preparation for a follow-up discussion with the Doctor. The Dental Hygienist or experienced assistant can help the patient with this preliminary examination. See Figure 1.

Following a history and a thorough clinical examination, it would be reasonable to expect to obtain all the information possible about this patient before finalizing a treatment plan. One of the areas of additional information is the radiographic survey. It is much better to explore with an x-ray rather than with a bur or a scalpel. If a radiological record is not in your possession a complete survey should be done. This consists of a minimum of 20 to 24 films where regular size films are used for the posteriors and interproximal areas, and the narrow (numbers 0 to 1) for the anterior. All areas must be included.

An x-ray is simply a shadow record and it may be of interest to review the rules of shadow casting:

1. The source of light should be as small as possible.
2. The distance from the source of light to object should be as long as possible.
3. The distance from the object to the recording surface should be as short as possible.
4. The object and recording surface should be parallel.
5. The source of light should strike the object and the recording surface at right angles.

After using the short cone for over twenty years and a long cone for the last nineteen years, I am personally convinced there are definite advantages in the use of the extended target-film distance. The paralleling technic is strictly one of film placement.¹ The extended target-film distance gives the operator the necessary latitude to increase the object-film distance in order to place the film in a plane parallel to a line drawn through the long axis of the tooth. With the short cone the object-film distance must be minimal, but the anatomical structure permits contact at the crown and about a 10 mm. object-film distance at the root apex - the specific area where the most accuracy is needed. This can easily be demonstrated by using a perforated bur tray out of a sterilizer or any piece of perforated metal or wire

Patient History and Registration

Personal Information

Name Sex Age Number

Birthdate Birthplace Racial origin

Marital status Date of Registration

Occupation Firm Address Phone

Residential address Residence phone

Forwarding address (friend or relative) Phone

Personal physician Address Phone

Personal dentist Address Phone

The following questions to be answered by the patient. All information given is confidential.

Dental History

1. What dental condition concerns you at present?
.....
2. What is the history of this condition?
.....
3. Have you had regular dental examinations (at least annually) in the past? Yes. No.
4. Have you had dental X-rays within the past year? Yes. No.
5. Have you had teeth extracted due to accident, decay or periodontal (gum) disease. Underline which one(s) Yes. No.
6. Have lost teeth been replaced by fixed bridges, partial dentures or full dentures? Underline which one(s) Yes. No.
7. Have these replacements been satisfactory? Yes. No.
8. Have you ever had root fillings? Yes. No.
9. Have you ever had periodontal (gum) treatments? Yes. No.
10. Have you ever had abscessed teeth, sore gums or sore mouth? Underline which one(s) Yes. No.
11. Do you have any habits that may affect your teeth, such as clenching, grinding, nail biting, etc.? Yes. No.
12. Do you maintain good oral hygiene by regular brushing? Yes. No.
How often?
13. Do you try to regulate the intake of sugar in your diet? Yes. No.
How?

Medical History

- | | | |
|---|------|-----|
| 1. Have you ever had a serious illness? | Yes. | No. |
| 2. Are you under the care of a physician now? | Yes. | No. |
| 3. Have you had a medical examination within the past year? | Yes. | No. |
| 4. Do you use medicine of any kind regularly? | Yes. | No. |
| 5. Have you ever had any of the following? | | |
| (a) Liver conditions | Yes. | No. |
| Jaundice (yellow skin and eyes) | Yes. | No. |
| (b) Diabetes (sugar disease) | Yes. | No. |
| (c) Tuberculosis or any lung condition | Yes. | No. |
| (d) Venereal disease | Yes. | No. |
| (e) Heart or blood vessel condition | Yes. | No. |
| high blood pressure | Yes. | No. |
| stroke | Yes. | No. |
| shortness of breath | Yes. | No. |
| chest pain | Yes. | No. |
| swollen ankles | Yes. | No. |
| (f) Nervous conditions | Yes. | No. |
| (g) Epilepsy | Yes. | No. |
| (h) Cancer | Yes. | No. |
| (i) Thyroid conditions | Yes. | No. |
| experience of nervousness | Yes. | No. |
| room temperature too warm or too cold compared to other persons | Yes. | No. |
| (j) Kidney conditions | Yes. | No. |
| (k) Arthritis | Yes. | No. |
| (l) Gastro-Intestinal conditions | Yes. | No. |
| nausea and vomiting | Yes. | No. |
| altered bowel habits | Yes. | No. |
| (m) Rheumatic fever | Yes. | No. |
| if so, was there any damage to heart valves | Yes. | No. |
| if so, were you confined to bed for a long period | Yes. | No. |
| (n) Blood disorders | Yes. | No. |
| anemia | Yes. | No. |
| easy bruising | Yes. | No. |
| excessive bleeding following injury, surgery or tooth removal | Yes. | No. |
| (o) Allergic reactions | Yes. | No. |
| do you ever have hay fever, asthma, hives or skin rash | Yes. | No. |
| have any members of your family experienced any of these | Yes. | No. |
| have you ever had a reaction to a local (dental) anesthetic | Yes. | No. |
| name and address of dentist | | |
| have you ever had a reaction to | | |
| aspirin | Yes. | No. |
| penicillin | Yes. | No. |
| iodine | Yes. | No. |
| sulfonamides | Yes. | No. |
| barbiturates | Yes. | No. |
| other medicines | Yes. | No. |
| 6. Have you ever had injury to your face or jaws | Yes. | No. |
| 7. Have you ever had surgery or X-ray for a tumor, growth, or any other condition in the mouth or on the lips | Yes. | No. |
| 8. (Women) Are you pregnant | Yes. | No. |
| 9. Are you on a diet? Physician's orders or self imposed | Yes. | No. |
| 10. Is there any history of family disease? | Yes. | No. |

Patient's Signature—

Checked By—

Fig. 1 (Continued)

screening. Place a film in contact with the metal and expose, then increase the distance between the metal and second film by one centimeter and make a further exposure. Repeat this with a 16" target-film distance. Process and compare the films as to the size and definition of pattern. If you wish to go one step further, place the first two films at an angle as they would be in the mouth in relation to the lingual of the tooth crown and the root in the bisecting angle technic. Place the second film at an increased object-film distance but parallel to the metal and expose the films with a 7" and a 16" target-film distance, process, and compare.

Some of the advantages of the increased target film distance are as follows:

1. Quality definition of image (detail sharpness).
2. More exact relationship of anatomical structures.
3. Accuracy of image in alveolar, periodontal and periapical areas.
4. Less overlapping of the central beam.
5. Reduced secondary radiation.
6. Magnification and distortion reduced to the minimum.

The tubehead can now be obtained with a built-in long cone that projects no further than the short cone from the head of the machine. If the space around the operator's chair was the limiting factor, this is now the same for the short or long cone apparatus.²

The radiograph should display fine detail, good photographic quality and minimum image distortion. These films should be mounted in proper orientation and examined with a viewbox having an even intensity of light. The exclusion of all light except that coming through the films, and the use of a magnifying glass permits the viewer a greater opportunity of noting the detail of every portion of each film. Further illumination through the use of a bright spot viewer where a single film can be examined by a more intense light sometimes brings out aspects that can be missed or do not appear as definite in the full film mount.

Higher kilovoltage will result in longer scale contrast of the image. This means more greys (gradations between black and white). These intermediary greys are needed in order to study in detail the variable densities through which the rays have passed and therefore are of diagnostic value.

Attention should be given to four rules of interpretation:

1. The area to be examined must be shown completely with anatomical and technical accuracy and with two or more views.
2. The films must show all the boundaries of a suspicious area with normal bone showing beyond.
3. The interpreter must be familiar with all anatomical landmarks and with the various conditions both pathogenic and nonpathogenic that may produce roentgenographic shadows.
4. A complete evaluation of all teeth and edentulous areas is required regardless of whether or not clinical abnormalities are shown.

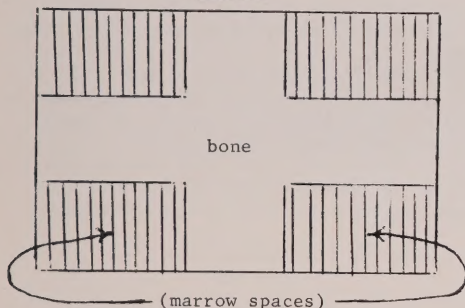
In oral radiology in order to have the maximum quality of film detail shadows of small individual areas must be examined separately. The oral cavity is one of the particular locations in the body where anatomy of teeth and associated bone is located on a curve. Lateral and antero-posterior extraoral films result in super-impositions and distortions. Panoramic films result in marked distortions although a gross overall survey type of film of this type will give preliminary information.^{3&4} The only technic to date that gives minute detail of teeth, pulp chamber, proximal caries, calculus, alveolar crest, periodontal space, and proximal bone is that of using a number of small intraoral films. More than two teeth are seldom in maximum focus at any single exposure, therefore a complete intraoral survey consists of 20 to 24 films if each tooth, or area where a tooth should be, is to appear in two aspects. For

detailed information of the temporomandibular joint, ramus, or maxillary sinus the lateral and antero-posterior extraoral views are required.

The reflections of bone changes are the direct result of the degree of mineralization of bone. There is a simultaneous interplay between bone formation and bone resorption. Throughout life, there is more or less an equal balance of osteogenesis and bone resorption. The normal stimuli to the osteoblasts are the stresses and strains to which the area is subjected and when examining osseous tissues it is well to keep in mind the constant change, balance or imbalance corresponding to health or disease. Wolff's law stated that the number and shape of trabeculae in a given area are dependent on the stresses and strains in that area.

It might be pertinent to consider four broad classifications of types of alveolar bone and illustrate with diagrams:

NORMAL

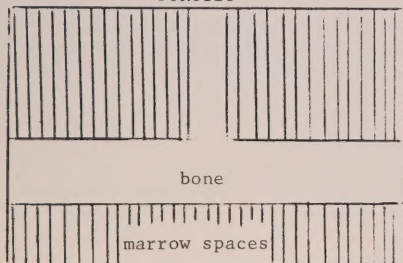


- a. Normal (within normal limits) - "average number of trabeculae" per given unit, and average thickness of the cortical plates of the dental ridges and alveoli.

Trabeculae - supporting bone; medullary bone; spongiosa; spongy bone.

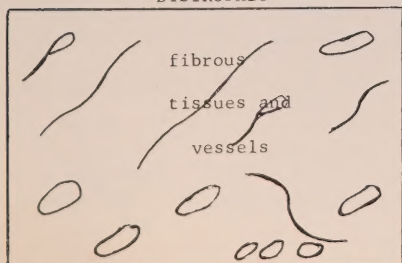
Cortical plates - the cortex; corticalis; compact bone; lamina dura.

POROTIC



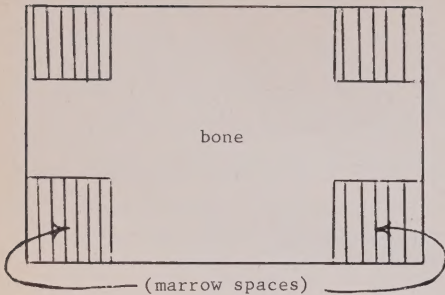
- b. Osteoporosis (porotic or porous bone) a "decrease in size and number" of trabeculae with an increase in the size of the marrow spaces; also, the corticalis is diminished and may be scanty or missing lining the alveoli. Osteoporosis does not necessarily mean a loss of mineral content; although naturally it is expected that a rarefaction and demineralization of the osseous tissues does precede the loss of these structures.

DYSTROPHIC



- c. Osteodystrophic (a malnutrition) "the supporting bone either never formed typically, or a degeneration has occurred with a resulting replacement with a very vascular type of fibrous tissue". In extreme cases, the corticalis of the alveoli disappears with a formation of pseudo cysts (brown tumors), and hypercementosis. With the hypercementosis the teeth become ankylosed and concrecence may occur.

SCLEROTIC



- d. Osteosclerosis (sclerotic bone - a hypercalcification; bone whorls; eburnated bone; marble bone); "an increase in the size and density of the supporting bone with a decrease or obliteration of the marrow spaces". Due usually to inflammation, infectious processes, trauma, or systemic disturbances - i.e. endocrinopathies.

Through the newspaper or popular magazine route many statements have been published that alarm the public; some dealing with the broad field of radiation, some specifically writing about radiation in dentistry.

To my knowledge, no one has yet related accurately total body radiation measurements to amounts of radiation received by exposing small areas of tissue. We must differentiate between local tissue and total body exposures.

Studies by the American Academy of Science and others has shown the genetic or gonadal amounts of radiation accumulated over the period - 0-30 years as follows:

Natural background sources	- 4000 mr
Man-made	- 4100 mr
Dental	- 100 mr
Fallout	100 mr - 400 mr

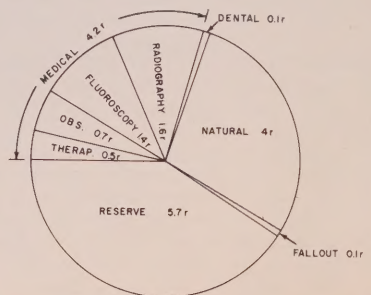
The radiation from medical and dental sources have often been pooled in a single figure - eg 4500 mr for a 30 yr period. - Here dentistry is placed at a distinct disadvantage due to the failure to state the separate amounts. A set of dental films (20) will yield approximately 1 mr in the male and .14 mr in the female by way of gonadal dose.⁵

One full radiographic survey per person per year from age 4 to 30 would result in a total gonadal dose of 26 mr (male) and 3.64 mr (female)

Since 1957 the dental profession has accomplished a greater reduction in exposure amounts of radiation than any other major category of man-made x-ray.

One intraoral survey - yields less radiation than:

- 1/160 annual dose in medicine
- 1/1000 annual dose from natural sources
- 1/4 dose due to fallout
- 1/3 dose due to building materials



The reduction of radiation in intraoral films has been obtained through:

1. High speed films
2. Improved beam shielding
3. Reduction of beam size
4. Adequate filtration
5. Minimum exposure time, plus maximum development
6. High kilovoltage
7. Open ended cone
8. Proper technic to avoid retakes
9. A leaded rubber apron should be used

The greatest amount of reduction (80%) has been the result of the adjusted film speed.

Changing from fixed periodic surveys to radiographic examination on an individual patient need basis is a further important factor. The taking of radiographs should be dictated solely by need of the patient and not be an automatic or period exercise.

The useful benefits of radiation should not be sacrificed to mass hysteria.

In summary, assuming the operator is aware of the principles of radiation protection the controlled use of x-rays is an essential part of oral diagnosis. The facts about dental radiology should be properly explained to the patient and to the public.

Complete information of the oral cavity and related anatomy cannot be obtained by a single survey. A combination of the intraoral, antero-posterior, lateral and panoramic views may each supply important information.

References:

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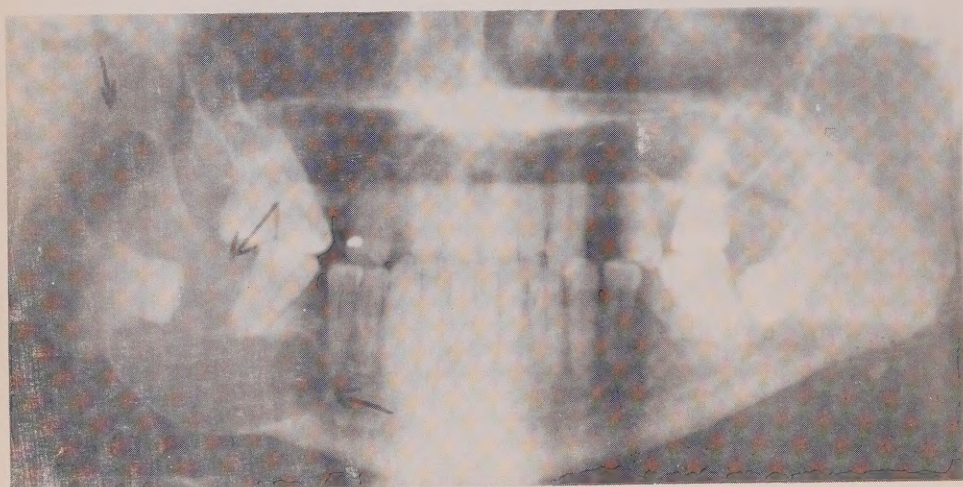
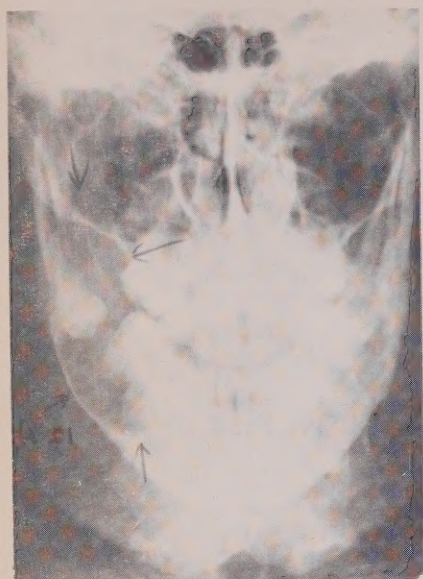


Fig. 2

Extension of cyst involving mandible and ramus
best shown in (Tomograph) panoramic film.

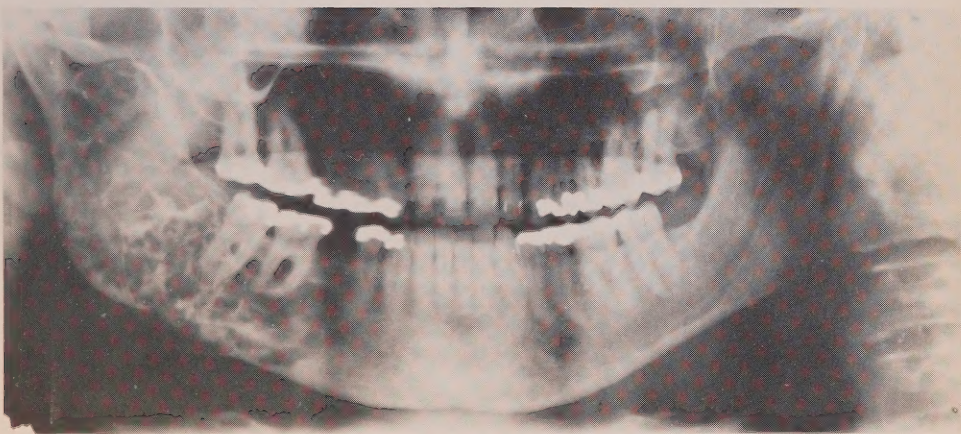
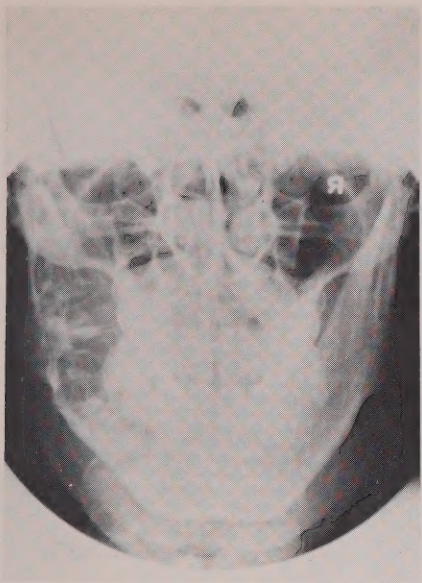
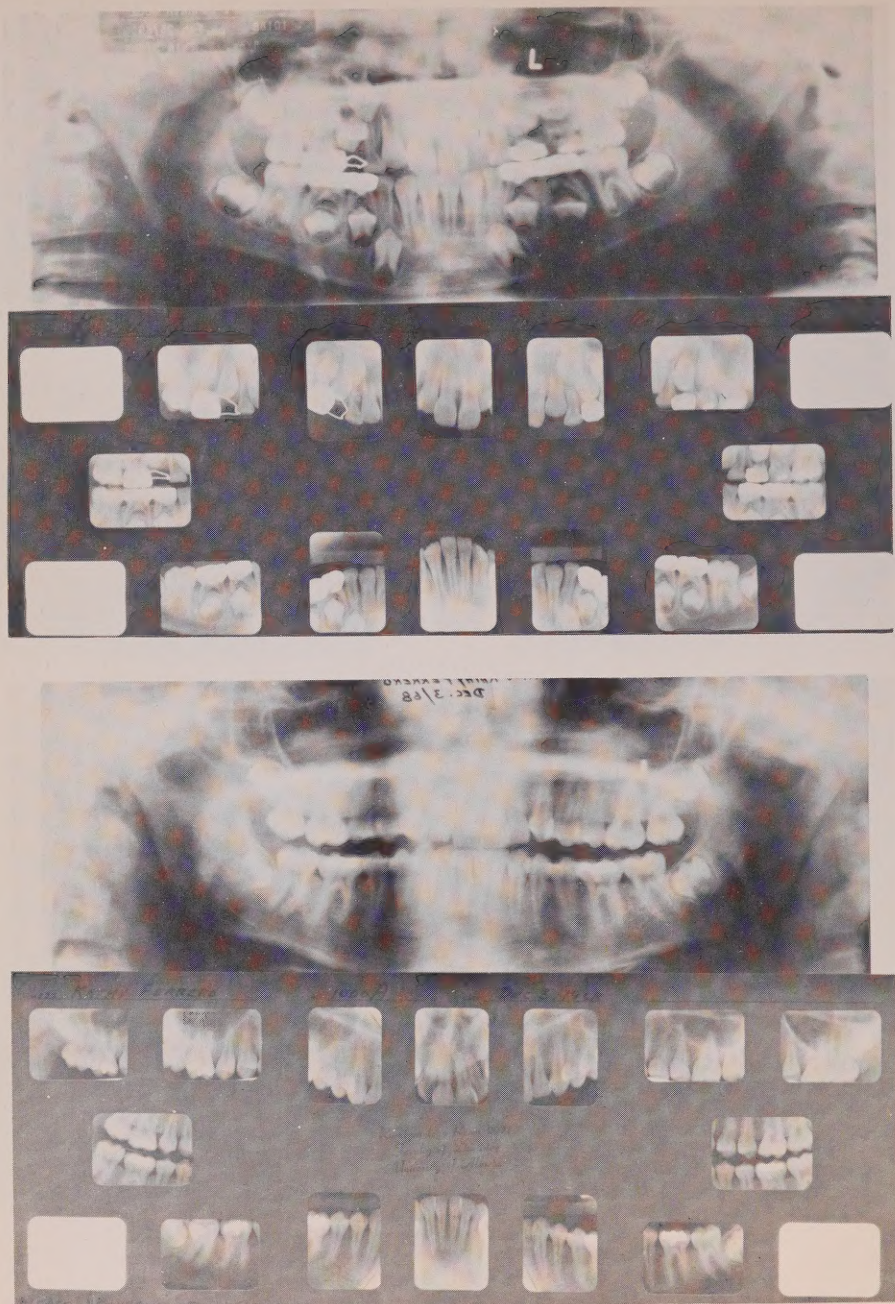


Fig. 3

Extension of fibrous dysplasia involving ramus and mandible best shown in panographic film.



Figs. 4 & 5

Demonstrate distortions in panoramic view that
are more correctly oriented in the periapical.

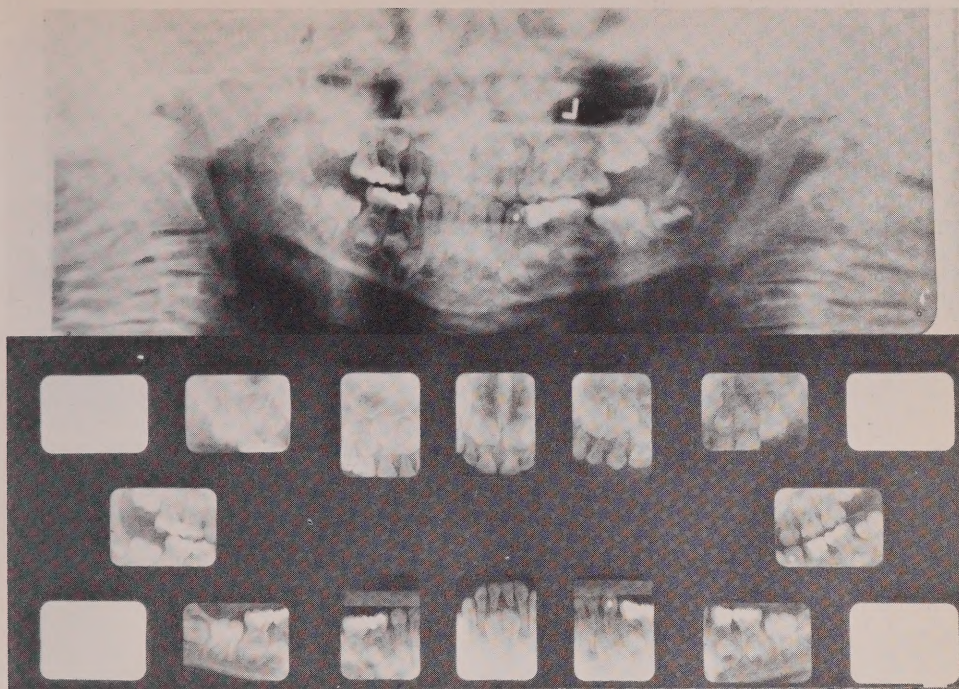


Fig. 6

Demonstrate distortions in panographic view that
are more correctly oriented in the periapical.

THE CANVAS CLINIC

Major PR McQueen, DDS



The helicopter eased over the trees, landed in the clearing and discharged six wounded men on stretchers. The wounded were taken into a large tent where two medical officers quickly scanned the tags tied to each casualty. "This one will be a priority one, I think we had better get him to the OR first."

These were simulated cases, part of the Trial Field Hospital Exercise conducted at CFB Kingston during May-June 1969.

The only logical sequel to the purchase of a semi-mobile field hospital by the Canadian Forces would be to evaluate it. This logic was prevalent in May of 1969, when the 71 tents of the hospital were erected near CFB Kingston. The role of a field hospital is to provide emergency war surgery, in this case, based on a ten day holding policy, ie, if the patient cannot be returned to active duty within ten days he must be prepared for evacuation to Canada.

The hospital had 100 beds and a staff of 141 and was self-sufficient as the twenty-four hour drone of the diesel generators attested. For two weeks the provision of hydro, water, rations, quarters, mosquitoes and rain was the responsibility of the Trial Field Hospital. For two weeks CPL Paul Timmers and the author participated in the exercise as members of the dental detachment. This article describes the how, when and why of our participation.

The Canadian Forces Medical Service indicated need for a dental detachment in the field hospital, it was accepted as an opportunity to determine the role of the RCDC in such an establishment and to evaluate dental equipment under field conditions.

For the dental detachment, the exercise began in early May at the QM Stores where we signed out clothing, field, summer, combat, for the purpose of:

A few days later the clinic tent was set up and ditched. A tent was employed in lieu of the dental van since air portability was a prerequisite of the field hospital. The small size of the tent was its liability as can be seen from the photos. The inadequacies were obvious in terms of negotiable floor space and in the wide swings of temperature during intermittent sunshine. The second problem was corrected after a fly canvas was improvised.

The tent was provided with three 110 volt outlets. All water and stove gas were delivered daily in Jerry cans. The larger tents were heated with Hermann-Nelsons, however, ours being so small, we had no heat source save a 60 watt bulb. Consequently the temperatures ranged from 32°F to 95°F.

The key dental equipment was the Encore Console and Compressor. After correction of a few minor problems the Encore was a reliable and easy unit to operate. It would be my choice for any dental field work in the future. One photo shows the compressor located behind the tent -- this is to reduce the noise it creates.

Prior to this exercise, my last encounter with the folding field dental chair was at the Corps School in CFB Borden, as a part of phase three training. This versatile and unstable metal monster did not win me over. I would rather switch than fight. I know it fits into that trunk but.....

The recently acquired Philips Oralix, a portable 110 volt 7 ma x-ray unit was a pleasure to use. It requires ten minutes to set up or take down and fits compactly in a metal chest as the photos show. The quality and definition of processed films were comparable with those by installed x-ray units in static clinics. During the exercise the area was visited by a radiation survey team who performed a check on the Oralix. The survey indicated a well designed unit with a well collimated beam which satisfied safety regulations.

Various other dental items were employed and evaluated, such as the field light, the operating headlight etc, but they are not new to field conditions and are written up elsewhere.

Of interest was the processing of exposed dental x-ray film, while the CFMS radiology section processed wet films for us in 16 minutes, we set the developer fixer tank up in a corner of the tent and tried creating a mini darkroom inside a plastic garbage bag. Curiously enough after some effort the results were acceptable, offering testimony to improvisation based on imagination, adhesive tape, wire, pliers and necessity.

There's always a first time for a greenhorn in the field, mine was finding an officers mess operating in the forest. An old abandoned house was opened and "decorated" to serve as a joint officers and Senior NCO mess.

It was only two and a half weeks but we learned and enjoyed. Finally all the tents folded and with them the people. There is only the memorable élan of the Trial Field Hospital which remains --- Those were the days my friend. Dulce bellum in expertis.



- Top Left - Helicopter brings in casualties
- Top Right - Wounded are treated and sorted
- Center Left - Oralix and patient in position
- Center Right - Encore compressor and tent
- Bottom - The canvas clinic

EXERCISE NIMROD CAPER

Captain CW Kearns, DDS



The snow was falling and March was coming in like a lion, when the dental detachment of Private John Allain and I left our homes in CFB Petawawa to join the main task force group from the 2nd Battalion RCR in London, Ontario, for Exercise "Nimrod Caper", to be conducted in Jamaica 1 Mar-23 Mar 69. At 0600 hours, Thursday, 6 March we departed via Yukon Aircraft from London on a 6 hour flight, landing in 85 degree temperature at Palisadoes Airport, Kingston, Jamaica. From Kingston we were shuttled, via Buffalo Aircraft, 30 miles across the mountainous jungle terrain of Jamaica to the main base camp at Ken Jones on the northern shore -- very near the luxury resort area of Port Antonio!

After settling in camp, we established liaison with the dentists of the Jamaican Defence Force at Up Park Camp in Kingston. They graciously offered to provide the use of their facilities for any patients who could not be handled under emergency field conditions. We were later to make use of this offer on three occasions. These cases also provided an opportunity to have a look at Kingston.

The types of dental emergencies which can be expected on an exercise such as this included the usual toothaches and fractured anteriors. The latter are almost inevitable, when 600 Canadian soldiers are given a weekend pass in Montego Bay at the same time as 400 American sailors are let loose from the aircraft carrier USS Saratoga.

In spite of some interesting dentistry, we were not overworked, and thereby, had the opportunity to see a large part of the 190 mile long, 40 mile wide island. I spent an interesting weekend driving the length of the island. The tour included an overnight stop at Ocho Rios and a visit to the Jamaican Playboy Club, along with numerous swims in Montego Bay.

The standard of dental health among the natives of Jamaica is very low. Decay is rampant, as sugar constitutes a mainstay of the local diet. It is not unusual to see people strolling along, gnawing on a three-foot length of sugar cane. I had the opportunity to help out a few of the "locals" with their toothache problems. There is one dentist in the area of 50,000 people surrounding Port Antonio. He is a young competent Jamaican, who was trained at the University of Edinburgh and is now on a commitment to the Jamaican Government. All dentists are foreign trained either in Britain, USA, or a few in Canada. As one can image, the type of dental work done consists mainly of surgery and hospital work. One sees a lot of anterior gold work which is still a status symbol in Jamaica. The average income of a dentist is probably one-third of what he would earn in Canada but this is easily compensated for by the low cost of living (one would expect to have at least a maid and a housekeeper). Numerous Canadian servicemen have retired to the northern coast.

It was truly enjoyable to be picking bananas, coconuts, mangoes and other tropical fruit from the local vegetation, while Canada was in the throes of cool March weather!

SPLINTING: AN AID TO PERIODONTAL TREATMENT

Major CM Mason, DDS



When periodontal treatment is started before extensive damage has occurred, most cases will fully respond to the prescribed therapy. Natural repair processes often heal the tissues; bone and soft tissues will frequently regenerate and provide support for loosened teeth, which then become stabilized in their alveoli. Scaling, curettage, and selective tooth grinding are adequate for removing primary sources of trauma, and surgery eliminates infected and useless tissues. However, many cases occur in which the remaining bone and periodontal membrane are inadequate to resist the pressure to which the teeth are subjected. Repair processes are not fully consummated because the forces and stresses interfere with healing. In many such cases, however, repair will occur if the affected teeth are stabilized and immobilized, the pressures reduced, and the various torques eliminated. Dental splints may be used successfully for this purpose.

Fixed splints may be either provisional or final, as the condition and case may indicate, and there is a wide variety of materials and types of splints available. These will be discussed later.

One might now wonder what value a provisional splint has, especially in cases where it is felt that a final or permanent splint will be required eventually. Some of the values or indications for provisional splints are:

1. Permit the operator to do periodontal surgery under conditions of immobilization, stabilization, and function, and thereby prevent interference with repair, which might occur if the teeth were loose.
2. Provide a method of evaluating the reaction of the periodontal tissues to other therapy, and of those teeth whose prognosis is guarded.
3. Prevent shifting and drifting of teeth during other periodontal treatment.

Prior to discussing the treatment planning and selection of the type of splint to be used, the sequence of fixed splinting in relation to other phases of treatment should be briefly mentioned.

The first phase of treatment should be scaling, curettage and home care instruction. Some occlusal adjustment can also be done by means of selective tooth grinding. A more definitive selective grinding may not be necessary if extensive splinting is planned for both arches, because occlusal balance will be obtained by creating proper relationship between opposing and adjoining castings and pontics. Extraction of hopeless teeth is done after the gross inflammatory processes have been reduced by the scaling and curettage procedures, followed by insertion of provisional fixed splints. During the period that provisional splints are being worn, further periodontal surgery, curettage and selective grinding can be done. Periodontal tissues are checked after the splint has been worn for several months. The case may require additional therapy and should be checked again several months later.

Final fixed splints are inserted after all inflammatory and granulomatous tissue including the periodontal pockets has been eliminated. The alveolar bone should

show repair by regeneration of bone which will appear denser at crestal areas. All irregular bone edges should have disappeared during the wearing of the provisional splints. The architectural form of the gingiva should also have been restored before insertion of final fixed splints.

EXAMINATION AND TREATMENT PLANNING FOR FIXED SPLINTS

Before prescription can be made and operative interference is started, the findings from the clinical, radiographic, and study cast examinations should be carefully studied and analyzed. From this it can be decided how many teeth are to be used for abutments; the crown to root ratios and leverage factors; the inclinations of the teeth and how this may influence the paralleling of abutment preparations. Determination of the number of hopeless teeth should also be made in the planning of treatment and then indicated for extraction so as to avoid their use as abutments. The various clinical and radiographic pathological findings are also established and correlated in the treatment plan.

CLINICAL SURVEY

The main considerations in respect to the clinical survey or examination of the patient must be:

1. Anatomical and Clinical Crown Length

Usually the clinical crown will be long enough to retain the castings because of bone resorption which has led to gingival recession. If the clinical crown is short and there is little periodontal involvement, gingival resection may be required to expose more crown. The form of the clinical crown and its position in relation to adjoining and opposing teeth will determine whether a full, three-quarter or three-surface casting is to be used.

2. Mobility of the Teeth

The grade of mobility helps decide if splinting is necessary and will be a guide in determining prognosis. An apico-occlusal movement indicates greater periodontal involvement than bucco-lingual mobility. The former would indicate a poorer risk as an abutment tooth, but not necessarily a hopeless prognosis.

3. Position, Shape and Depth of Pockets

Teeth with deep periodontal pockets will require stabilization by splinting, because of increased leverage due to a longer clinical crown. Prognosis is better when roots are long and big, than in cases where roots are short and thin with equivalent pocket depth. This is so because large roots have more bone and periodontal attachment than small roots. Teeth requiring splinting generally have a poor prognosis if the pockets around them are circumferential or circuitous and deep.

4. Position of Teeth in the Arches

Malaligned teeth may not permit seating of the castings without including cast key and key-way interlocking attachments. This type of device should not be used between the last abutment tooth in the splint and the adjoining one, especially if they are loose, as movement of them may occur during mandibular excursions.

5. Number of Teeth to be Splinted

It is preferable, wherever possible, to have no fewer than two sets of

double abutment teeth on both sides of the pontics. In all instances, over splinting is preferred to under splinting. An example would be where mobility is detected in several maxillary anterior teeth. All incisors, cuspids and bicuspid should preferably be splinted together on both sides. If only the six anteriors were splinted here, there would be a tendency during movements of the mandible to force the six anteriors, along with the splint, in a labial direction.

6. Occlusion

If clamping, grinding and attritional factors are present, they should be corrected where possible. As mentioned previously, a definitive selective grinding may not have to be done if prematurities can be eliminated in the fabrication of the splints.

7. Edentulous Areas

Finally, the condition and shape of the saddle areas and the vitality of abutment teeth must be carefully determined prior to treatment.

RADIOGRAPHIC SURVEY

The width of periodontal spaces should be evaluated and correlated to the depth of the pockets as previously measured. Radiographs allow us to analyze the length, shape and number of roots of teeth being considered as abutments, etc. The amount and nature of bone loss and the distribution of bone loss can be ascertained from radiographs. Size and shape of pulp chambers can be determined with radiographs and thus help to decrease the danger of pulp exposure in the preparation of teeth to receive full crown castings.

STUDY CAST SURVEY

Plunger cusps, facets, steep incline planes, etc will be more apparent on study casts since the translucency of enamel, wet with saliva, tends to distort the contour of the occlusal surfaces.

The lingual occlusal relationship can only be seen on study casts. This will disclose anatomical abnormalities of teeth which otherwise could be overlooked.

The axis of preparation of tooth abutments, as well as guide preparations, can be done on study casts.

To this point the three main surveys to be undertaken in the examination and treatment planning have been considered. It is also essential to consider the emotional and physical state of the patient. Some patients, because of their temperament and nervous patterns, would not be desirable subjects for the necessary procedures. An attempt to determine the pain and emotional threshold is desirable. The limitations imposed by the physical health and age of the patient are considerations which the operator must pre-determine through the medical history and consultation with the physician when indicated. If a patient is chronically ill, splinting should be delayed until the health is improved. The impact on patients' emotions when they hear that many or all teeth have to be extracted must also be evaluated before such a diagnosis is made evident.

The patient's attitude toward operative procedures must also be considered. Patients may be reluctant to accept splints of any kind, which are unsightly or unattractive in appearance. Others may be reluctant to accept extensive fixed splinting because of fear of having teeth ground for abutments. They are fearful that the abutment teeth may be seriously damaged. The various things that may occur during the operative procedures, such as pulp death or exposure, should be explained to the patient. The possible loss of teeth that will occur if splinting is not performed

should also be explained. There are, of course, many other concerns and questions patients will have regarding these procedures and extreme care must be taken in this respect to avoid misunderstandings.

SUMMARY

The basic fundamentals in considering splinting as an aid to periodontal treatment have been briefly covered. The necessity of a sound diagnosis and treatment plan, and the relation and sequence of splinting to other periodontal treatment has been pointed out. Detailed preparation and construction of the splints has not been considered but many types of splints which are available, have been mentioned.

* Editor's Note

This paper was presented while Major Mason was on course at CFDS in CFB Borden.

The RCDC News

Honors and Awards

COL GR Covey and COL IG Craigie received Fellowships in the International College of Dentists at a ceremony on 9 July 1969 at the Canadian Dental Association Convention in Montreal presided over by Dr JA Fortier, President of the Canadian Section of the International College of Dentists.

Promotion



Canadian Forces Headquarters recently announced the promotion to LCOL of MAJ JMA Donely.

A graduate of the University of Toronto, LCOL Donely has been on the instructional staff at the Canadian Forces Dental Service School in Base Borden for the last four years.

LCOL Donely has been posted to Canadian Forces Base Cornwallis where he will command the recruit treatment facility.

Division News

CWO Jones Retires

CWO Al Jones retired after almost 30 years service. He will continue to make his home in Ottawa. He was presented with a golf bag on May 26 at a party in his honor and has subsequently put it to good use.

CWO Jim Taylor, Al's replacement, is making his presence felt and has already been signed up for the Division golf team.

by MJO HJO Franzgrote
and 2LT JCRM Chagnon

Armed Forces Day Borden 14 Jun 69

The CFDSS provided a dental display for Armed Forces Day which included our Field role using the dental vans and field equipment as well as a static display of our modern clinical equipment. The display consisted of three main themes:

1. An audio visual display from Ontario Dental Association dealing with dental health;
2. A section devoted to the recruitment of dental personnel; and
3. A display for the fabrication and fitting of mouth guards for a Base football team.

Course personnel (DOTP Phase III and DENT THR PL 6) aided staff in manning the displays.

Entraînement

Le 9 juin, l'école dentaire de la Base des Forces Canadiennes de Borden accueillait trente-cinq étudiants des différentes facultés dentaires canadiennes. Ces jeunes officiers y passeront environ deux mois afin d'y suivre leur troisième et dernière phase d'entraînement qui comprend entre autres quelques notions sur l'organisation et l'administration des forces armées en général ainsi que du corps dentaire, un entraînement au travail d'équipe en clinique, une semaine à Meaford, Ontario, et une semaine à Washington DC.

Comme par les années passées l'enthousiasme ne manque pas au sein de ce groupe. Peut-être que quelques-uns des lecteurs se souviendront d'avoir vu un char d'assault sortant de l'ordinaire par ses multiples couleurs s'ils étaient de passage au camp l'été dernier! Il faudrait alors s'attendre qu'après la graduation du mois d'août, quelque chose d'inattendu survienne une fois de plus, surtout que pour la majorité d'entre nous, ce sera la dernière occasion de laisser notre marque sur la base de Borden. Donc, il va de soi que nous n'y manquerons sûrement pas.

Special Qualifications



LCOL PS Sills has successfully passed the examinations for certification by the American Board of Prosthodontics and is now a Diplomate of the Board.

MJO Hans Franzgrote was admitted to the board examination in dental hygiene of the Royal College of Dental Surgeons of Ontario, June 16-17, conducted at the University of Toronto, passed successfully and is the first male dental hygienist with a RDN certification in Canada. History was made by the CFDSS.



Top Student



CPL Marie Grandchamp of No 25 Clinic Griesbach Barracks in Edmonton attended the PL 3 course for dental assistants and was the outstanding candidate.

Visits

Twelve dentists undertaking graduate studies towards the DPH diploma at the University of Toronto and two of the University staff members, Dr AM Hunt, Professor of Public Health Dentistry and Director of post-graduate Dental Education, and Dr Roger Ellis, visited the CPDSS on April 18 and had the opportunity to observe armed Forces preventive dentistry methods, and the employment and work of the Canadian Forces auxiliary dental personnel.



MMO J Sadler explains the trades progression of military dental auxiliaries to Dr Roger Ellis and Professor AM Hunt of the University of Toronto who accompanied the DDPH graduate students.

MAJ Bill Susser is presently completing his studies in dental public health with this group.

Guest Lectures

COL LG Craigie and LCOL AG Andrews attended the 10th Annual Canadian Forces Medical Service Clinical Conference at the Canadian Forces Hospital in Kingston, Ont. 24-25 April where LCOL Andrews presented a paper "The Dental Officer In The Team Concept Management of Maxillo - Facial Injuries."

From Kingston LCOL Andrews continued on to Ottawa where he again presented papers to the "Ottawa Dental Study Club".

Training

LCOL AG Andrews will leave the CPDSS to undertake graduate studies in dental surgery at the Doctors Hospital in Toronto.

MAJ Henry Marion is leaving for the University of Montreal to commence graduate studies in Orthodontics on August 5th. He will be well remembered in the Base Borden community for his charitable work and will certainly be missed at this school. A Bientot, MAJ Marion.

Special Course

CAPT DW Pettigrew attended the workshop on hypnosis by the American Society of Clinical Hypnosis, 18-21 April in the Royal York Hotel Toronto.

The dental Equipment Maintenance Technician Course (DEMT PL 4) started 12 Apr 69 and lasts for six months at the CFDS School. It is the first course of its kind to be conducted at the CFDS. Instructors are MWO Bill Morris, SGT Bill Parker, CPLs Pete Nadeau and John Clint. CAPT Dave Cartwright supervises and directs the training.

CAPT DD Robertson Retires



CAPT Robertson, better known as "Robbie" to all his confreres is leaving the service after 27 years. "Robbie" was born in Niagara Falls, Ont. He joined the service in 1942 and served five years in the Dental Corps attached to the RCAF. Going overseas in 1942, he served in England and the Continent. Robbie was released in 1945 and rejoined in 1947 and served in Galetown, Camp Borden, Ottawa, Germany and was posted to the CFDS in 1966 and commissioned in the rank of CAPT from WO1 as Laboratory Officer. Robbie, throughout his career, served 11 years at the School and imparted his knowledge and ability to the Lab Technician Trade, training hundreds of technicians from the embryonic PL 3 course through the advanced trade courses.

His wife, Glenda, and sons David and Alec will accompany him to London, Ont where his new duties will be Laboratory Supervisor at the University of Western Ont.

It's a civilian gain and a military loss, but we know that we'll see Robbie and his wonderful wife again at the CFDS Golf and Curling Tournaments and many other social functions. All success in your future endeavours, Robbie, and everyone in the CFDS wishes you "Bon Voyage".

1 Dent Unit

A "brush-in" was held at 1 Dent Det on 5 Jun 69. This "brush-in" was conducted by WO Fret in conjunction with Dr D Bell, of the Reserves. A total of 16 militia recruits between the ages of 14 and 17 were present.

MWJ Turcotte attended the annual CFMS Clinical Conference held at CFH Kingston, 24-25 Apr 69.

A party was held at the Airmen's Club, CFB Rockcliffe to bid farewell to CAPT Strom and SGT Hill on their retirement from the Armed Forces. They were presented with attache cases by the Unit.

On 27 May 1 Dent Det held a going away party for MWO Fediuk, CPL Mahlitz and CPL White.

Sports

On 6 Jun a "fishing derby" was held by this Unit. CAPT Stirling won the prize trophy for the largest fish caught (this one didn't get away) awarded by Iabatts. SGT Schmelzle was the runner-up. LCOL Harrington, his son and SGT Hill also won prizes. Richard Harrington won the "GRAND AWARD" a radio. 18 members of the Unit participated.

11 Dent Unit

by MWO RD McHugh

Special Events

BGEN BP Kearney was a visitor during the month of May. He attended the British Columbia Dental Association Convention held in Vancouver BC from 14-17 May. Accompanied by COL Evans he visited the West Coast dental facilities.

MAJ JVP Chatwin from Dental Services Division Ottawa accompanied by LCOL DH Hillier conducted Preventive Dentistry demonstrations at CFB Comox, CFB Chilliwack and CFB Esquimalt during the period 5 to 12 May 69.

Recent farewells were said to CAPT WH Dunnigan CFB Edmonton; CAPT MG McRae CFB Comox; and CAPT JWC Walls of HMC Dockyard. These gentlemen have completed their five year term of service and will now take up private practice. CAPT Dunnigan will hang out his shingle in Edmonton, CAPT McRae has set up shop in Courtenay BC and CAPT Walls is located in Abbotsford, BC. We wish the Good Doctors well in private practice.

A get-together of personnel from the Calgary Dental Detachments at Camp Sarcee and Curry Barracks to honour MWO Stan Madge on his retirement was held in the CFB Calgary SGT's Mess on 2 May. A presentation was made to MWO Madge at that time. In the evening a party was held at the home of Mrs Sisson that also included the wives who gathered to say farewell to Stan and his wife.

A farewell party was held 23 May for WO Glen Storms who was released at CFB Esquimalt on 2 Jun 69. A retirement gift was presented on behalf of the staff of clinics in the area by LCOL HR Kettlys.

A party was held in Unit QM Stores Edmonton on Friday 30 Jun 69 to say "farewell" to CAPT WH Dunnigan, WO Chuck White and PTE Maxine Roseberry who are leaving the service. WO White is retiring after 26 years service and has accepted a position with Simpsons-Sears in Edmonton. PTE Maxine Roseberry is leaving the service on the 26 Jul to marry CPL NG Jones in Saskatoon, Sask on the 6th of Sep 69. They will reside in Cornwallis where CPL Jones is employed as a dental assistant.

Sports

CAPT KHE Rosengart, Detachment CFS Holberg received an Air Defence Command Sports Achievement Award for completion of a 12 mile swim.

The following story comes out of Cold Lake. Recently LCOL RB Jackson and MWO Earl McFadden decided to do a little after supper fishing. At approximately 1800 hrs they pushed off from shore in their small fishing vessel. In a very few minutes LCOL Jackson hooked his first big one, weighing 22 lbs. Before you could say Bob's your uncle, he had another one on his line, this only 18 lbs. In rapid succession he had hooked five more weighing 15, 11, 11, 9 and 8 lbs. Earl was not idle either. His four weighed 13 lbs, 11 lbs and two eight pounders. All in all their total catch weighed 134 lbs. All this took less than an hour as they returned to shore at 1845 hrs, a little weary but with a story to tell to anyone who would listen. All this may sound a little "fishy", but as Phil Harris says in his song, "It's true, because we know the soldiers".

12 Dent Unit

by SGT GR Jennings

The RCDC in Sea Element Role

In order that those unfortunate individuals who live "inland" in this country of ours might be enlightened about the happenings out here on the Eastern Shore, the following is recorded.

Negotiations were started in late April to provide dental treatment on board the destroyer escort HMCS Restigouche. CAPT Harry Amos and SGT Glen Jennings joined the ship in time to enjoy the "all expenses paid" trip to Montreal, Trois Rivières

Rimouski and Quebec City for the period 5-25 May 69. The team, incidentally, turned out a creditable amount of treatment with little or no difficulty. A good time was had by all and the crew of the Restigouche welcomed our people like long lost friends and were very hospitable. The possibility of sending teams with other destroyers is now under active investigation. Anyone wishing such a trip should apply early through normal channels.

Civilian Dental Assistants

This unit was requested by the Nova Scotia Institute of Technology to help in the training of dental assistants. Prior to graduation the students do a period of practical instruction. Three teams of two girls each worked for two week periods from 21 April through to 30 May at the Stadacona clinic.

13 Dent Unit

by SGT ES Beattie

Honors and Awards

CAPT VO Bergland was presented the 1st clasp to his CD by COL RHC Cunningham on 25 Jun 69. The official date of the award, however, is 7 Dec 67.

Marriages

CPL PR Coss, on temporary duty from the Dental clinic, CFB Clinton, to CFS Moosonee for six months from Dec 68 to Jun 69, climaxed his stay at CFS Moosonee by marrying Miss Charleen Pineault on 23 May 69. Miss Pineault was a school teacher with the Moose Factory Board of Education.

Retirements



ICOL RA Fell with COL RHC Cunningham presenting a silver tray on behalf of 13 Dental Unit personnel to MAJ PL Falkner on his retirement from the service.



COL RHC Cunningham, presenting a silver tea set to MAJ JD Bourque on his retirement.

MAJ Bourque retired after a career which started with the navy from Feb 1941 until Sep 1945 where he attained the rank of Petty Officer. After his release from the navy he returned to school at Dalhousie University where he graduated in dentistry. He enrolled in the Royal Canadian Dental Corps and was promoted to CAPT in 1951. Since then he has served in Korea and most provinces in Canada. He returned on 13 Jul 69 to Antigonish, Nova Scotia, where he is working for the provincial department of health. Major Bourque will be missed by all who knew him in the Service.

Sports

Headquarters 13 Dental Unit hosted their biennial golf tournament on 20 Jun 69. Fifty-four golfers from Ottawa, Petawawa, Kingston, Toronto, Oakville, London and Clinton competed at the CFB Trenton golf course.

The evening barbecue steak dinner and dance was attended by one hundred and fifteen golfers, non-golfers and ladies. After dinner the trophies donated by Canadian Breweries and Molson's Brewery and the many prizes were awarded to the outstanding few.

In "A" flight - low gross - 1st - SGT Matt Hall (Molson's Trophy)
2nd - SGT Bill Hill
3rd - MAJ Ian MacDonald
4th - CAPT Max Fisk

- low net - 1st - Mr Tom Batten (Cdn Breweries' Trophy)
2nd - CPL Gerry Anderson
3rd - BGDN BP Kearney
4th - CAPT Vern Bergland

In "B" flight - low gross - 1st - Mr Bill Trembley (Molson's Trophy)
2nd - MWO Fred Neeve
3rd - CAPT Tom Ringland
4th - CPL JW Griffith

- low net - 1st - CPL Don MacKay (Cdn Breweries' Trophy)
2nd - MWO Mickey Kidd
3rd - MWO Jack Fraser
4th - MAJ HG Bunston

In "C" flight - low gross - 1st - CAPT DM Hodges (Molson's Trophy)
2nd - WO Gene Raymond
3rd - Mr Jack Trembley
4th - CPL Andy Violette

- low net - 1st - LCOL JM Smith (Cdn Breweries' Trophy
and Labatt's prize)
2nd - LT TA Rawlyk
3rd - WO Bud Lunnin
4th - CAPT DB Smith

Mr Bill Trembley, the winner of the Molson's Trophy for 1st low gross in "B" flight, is the son of Mr Jack Trembley, who is the local representative for Canadian Breweries. Thus, Molson's gave a trophy to Canadian Breweries.

14 Dent Unit

Special Events

Noonday luncheon and farewell party was held on 18 Apr 69 for MWO(A)(W) Pat Savage, at which time a presentation was made and best wishes extended from the staff of Headquarters, and Nos 1 and 2 clinics.

The 14 Dental Unit annual posting party was held on 14 Jun 69 at CFB Winnipeg (Westwin) with approximately 80 personnel attending including MAJ and Mrs Gullekson from Moose Jaw; CAPT and Mrs McCallum from Portage la Prairie, and CAPT and Mrs Poy from Gimli. MWO Tapp acted as MC. WO Roberts lined up an excellent musical program

and the food was very good. There were many farewells due to the large number of personnel leaving the unit.

Hobbies

CPL McRae of CFB Portage has added to his large collection of dog show prizes.

Dental Floss

Therapist: - Why didn't you brush your teeth this morning?

Muddy flood control soldier: - "I couldn't Sir, I was up all night patrolling the dikes looking for the Crest!"

15 Dent Unit

by MWO AF Davison

Postings, postings, postings! People come and people go, and those who want to leave stay on forever. A small gathering was held at CFB Montreal to say goodbye to CAPT TM Jackson and wish him happy holidaying on his posting to 35 Field, and to wish LT JP Carrier the best of luck in La Belle Province.

What is a Good Samaritan? If you should ask WO PD Peterson, he might have a few words for you. The story goes that an American tourist had a little trouble with his trailer which somehow became detached from the car on these good Quebec roads. Pete, being an obliging chap, stopped to give him a hand; the trailer somehow objected and slipped and fell, pinning Pete's finger to the ground. Net result - one broken finger - and now the doer of good has two weeks sick leave. What a way to get holidays in the summer.

It is too bad that MAJ JFA Marcil is leaving for a tour in Washington, as he has already started collecting golf trophies by winning the SGTs' Mess trophy at CFB Valcartier. CPL RM Clarke might be aiming to take his place, as he is attending the Quebec Regional playdowns at CFB Valcartier this week.

CAPT JIAR Bourcier and CPL JAN Audet have their summer work cut out for them, as they are at Camp Dubé looking after the Cadets in the summer training camp at Valcartier.

4 Fd Dent Coy

Professional Meetings

A Dental Officers Professional Meeting was held on 14 May 69 in the Canadian Officers Club, Soest, with the program presented by Officers of No 1 and 2 Dental Groups RADC, BAOR. Thirty-five Canadian, British and American Dental Officers were in attendance.

Field Training

June and Sennelager are synonymous in the vocabular of 4 CMEG. The Sennelager concentration from 6 to 28 Jun this year was unusual in that 4 Fd Dent Coy concentrated in one area as a company rather than with dental sections accompany their units. Most personnel, including base dental personnel, lived in the field for at least one week to carry out qualifications on personal weapons and practical phase of NBGW training - the gas chamber. Many personnel also had the opportunity to throw grenades and fire the M72 rocket launcher.

SGT Schuh maintained his reputation as a marksman - he hit a 4" square on a Tank with the M-72 while his instructor missed completely. Two clinic vans and a lab van were set up to provide dental treatment for the concentration period. This gave everyone an opportunity to become familiar with and use the field equipment.

Several members of the unit also participated in individual training periods on the Sennelager 18 hole range.

D-Day Anniversary

SGT G Sapergia was one of 11 veterans from the Brigade area who attended the ceremonies in Normandy commemorating the invasion that took place there twenty-five years ago on June 6, 1944. SGT Sapergia reports as follows:

"A bus, billets and food were thoughtfully provided by the French Airforce located outside of Caen.

The area was crowded with Canadians. The CBC had eight rooms booked at a hotel situated on the beach where the Regina Rifles had landed.

The beaches, a few Pill-boxes, punctured stone walls, and some pieces of "Mulberry" (the man-made harbour) are there to prove that it wasn't just a dream.

A fly-past by a Lancaster bomber and two Spitfires gave me my biggest thrill. When I was able to inspect the "Lanc" at close quarters, it was a moment flooded with nostalgia.

The coup de grace came when five Canadians, including myself walked into a cafe filled with the local people. They applauded and treated us to a round of drinks."

Sports



Top: Pictures selected by LCOL Windsor and submitted as indicative of the golf skills of the two RCDC units in Europe. (Photos by CPL JEL Frechette)

Left: MAJ Mason receives the prize for low gross score from LCOL Windsor (Photo by SGT A Schuh)

The Annual RCDC Golf Tournament (Europe) was held at the CLFE Golf Course, Fort Anne, on the 2nd of May. 35 Field Dental Unit were well represented and enthusiastically led by LCOL DH Protheroe. A total of 33 golfers participated with 16 golfers from Air Div and 17 from 4 Fd Dent Coy. The sports activity was blessed with reasonably decent weather in the form of scattered cloud and periods of sunshine. The golf tournament was followed by presentation of low gross and net prizes along with a buffet dinner in the club house. MAJ C Mason won the low gross with a score of 83.

Leave

PTE Bamford (RCASC) spent 36 days on leave to and in Australia. Having received word that his mother, whom he had not seen for 22 years, was seriously ill, an indulgence flight was arranged through the auspices of the RAF. The journey to Adelaide, with stopovers in England, Singapore and Darwin was speedy and uneventful. The return trip was considerably slower with numerous stops including 8 days in Singapore. The staff of No 1 Clinic are now busy attempting to discover the secret of throwing a boomerang. The only results to date have been broken windows. Mrs Bamford's health has improved following the visit of her wayward son.

35 Fd Dent Unit

by SGT DT Moran

CO Presents Paper

LCOL Protheroe visited Ramstein AFB on 18 Apr 69 and presented a paper on the RCDC Preventive Program to the West German Armed Forces Dental Society.

Preventive Centre Established

A Preventive Dentistry Centre was opened on 24 Jun in the building occupied by unit headquarters.

WO Lowery, the unit therapist, is working full time in the centre, and dental officers and assistants from 1 Wing clinic are staffing it on a roster basis. Field equipment is being used and Phase 1 preventive procedures only are being performed.

Zweibrucken Clinic to Close

The many Corps personnel who have served in the clinic at Zweibrucken will probably be saddened to learn that the clinic will close its doors on 1 Aug. Of the personnel remaining in Europe MAJ Cyrenne will become Base Dental Officer, 1 Wing and CPL Norma Boles will move to 4 Wing. CAPT Weeks is returning to Canada on posting to Namao and PTE Tucker was recently married and following her release on 1 Aug will return to Canada with her husband who has been posted to the Vancouver area.

Promotion

During promotion ceremonies at Supreme Headquarters Allied Powers (SHAPE) Belgium, COL B Christmas, Canadian Forces National Military Representative pins stripes on newly promoted SGT(A) WD Buxton, with assistance of WO(S) G Keeling. An illustration of unification of the Canadian Forces.



Civilian Dentists

Four civilian dentists are now employed in the Air Division by NPF for treatment of dependants. Drs Ivor Hamilton and Chad McIntosh are located in Iahr and Drs Peter Brymer and Peter Crack are at Baden Soellingen. Two operatories and an officers lounge have been added to the clinic in 4 Wing and a separate dependants' clinic will be opened in Iahr sometime this summer.

1 Dent Eqpt Dep

by CPL MD Longford

Sports

The Depot was represented at the No 13 Unit on June 20 by MWO Ernie Everett, SGT Matt Hall and CPL Don McKay. It would seem that their ground appreciation was carried out in a very detailed manner as Matt went around in 81 which won him the Molson Trophy for low gross and gave him first choice at the awards table.

Don McKay won The Canadian Breweries Trophy for low net, B flight and a chance at the groaning table as well.

Leave

The members of the Depot, can now and then be caught with a far away look in their eyes. This look may represent either the worlds largest fish, or the best dressed girl (single men only) or, a lost copy of some accounting document but more probably leave plans for getting away to some special Utopia.

Professional Training

University of Toronto

IAJ JF Begin - Public Health - Sep 69 - Jun 70

University of Montreal

IAJ JH Marion - Two year Post-Graduate course in Orthodontics

Walter Reed Institute of Dental Research

IAJ JFA Marcil - Advance Science of Dental Practice - Aug 69 - Aug 70

IAJ NH Andrews - Post-Graduate training in Periodontics - Jul 69 - Jun 70

Dr Hospital Toronto, Ont

ICOL AG Andrews - Oral Surgery - Jul 69 - Jul 70

Training

Canadian Forces Staff College, Toronto - Sep 69-Jun 70

MAJ IM Deyette

Canadian Forces School of Instructional Technique - CFB Clinton

Instructors Course - 26 May-11 Jun 69

WFO McDonald MO; CPLs JA Clint, RK James

Junior NCO Course

PTE JA Muir, PTE LA Lambert

Welcome to the Corps

A cordial welcome is extended to the following personnel who have recently joined the Corps:

CWO JW Taylor; CPLs D Frerichs, GG Carscadden, GE Sykes; PTE RAG Gayler, PTE VJ Arsenault, PTE D Purich, PTE KR Lamont, PTE KL Davis, PTE(S)(W) RJ Thomas, PTE(S)(W) MR Williams, PTE(S)(W) LE Supple, PTE(A)(W) NL Rivers, PTE(A)(W) SE Greene, PTE(A)(W) IL Kuepper

Promotions

To LCOL - JMA Donely

To CAPT - RJ Burns, RD Carver, MJ Cherun, JRJ Cote, JSHL Duchesne, MA Fortier, RY Gish, GM Hodges, P Kozak, KR Morley, CN Murray, DK MacKenzie, MFA Pilon, PP Psaila, RW Rix, GE Rocque, JBCM Simoneau, DB Smith, RI Stammers, JC Steel, DE Watson

To MWO - E McFadden, LR Barret, HEW Reid

To WO - DC Hughes

To SGT - WE Tweed, TRJ Kukurudziak, WD Buxton

To CPL - J Van Hemert, TJ Cooper

Retirements and Releases

MAJs JR Robertson, GOV Dippel, JD Bourque; CAPTs G Jalbert, JPJ Laporte, JAGD Pigeon, WH Dunnigan, MG McRae, JWC Walls, RWC Adams, DD Robertson, JO Strom; CWOs JE Shiner, TA Jones; MWO(A)(W) P Savage; WOs CR White, AD Bourgeois, TH Southin, GH Storms; SGTs WE Hill, AE Werkmann; CPL GR Burt; PTE(S) JW Nesrallah, PTE(S) RL Hebert, PTE(A)(W) BR Tucker, PTE(A)(W) MF Roseberry; Mrs R Dyrland, Mrs MA Osler

Postings

Since space does not permit listing all postings this Quarter you are referred to the postings section of CFSOs and the new RDCO Location List.

Vital Statistics

Marriages

CAPT JF Stengl to Tamar Tkachenko; CPL PR Coss to Miss Sharleen Pineault, CPL RG Brighty to Huguette Miscouche; PTE(A)(W) RR Tucker to CPL(A) Caddey

Births

Daughter - CAPT & Mrs IMC Wambara (13 DU), CAPT & Mrs WEJ Nind (14 DU), CAPT & Mrs PE Arnold (1 DU); SGT & Mrs N Cable (14 DU), SGT & Mrs TR O'Hara (13 DU); CPL & Mrs AH Peck (Adopted) (11 DU), CPL & Mrs DW Griffiths (14 DU); PTE & Mrs CH Forsythe (12 DU), PTE & Mrs LA Lambert (15 DU)

Son - MAJ & Mrs RB Andrews; CPL & Mrs A Busse (11 DU); Correction: CAPT & Mrs MacInnis twin daughters reported in the April issue of the Quarterly are in fact sons. "Viva la difference".

Condolence

Sincere sympathy is extended to SGT J Laverty who lost his wife in May and to COL IG Craigie, CPL TA Iarouche, SGT Frank Martell and CPL "Joe" Martell whose mothers recently passed away.

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Quarterly

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PREVENTIVE DENTISTRY

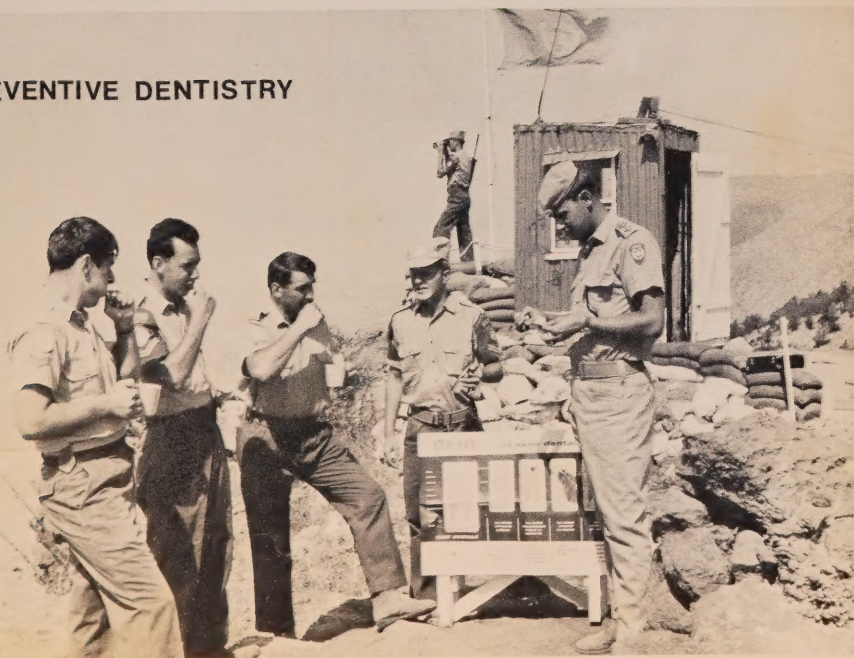


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The RCDC Quarterly

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This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

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Cover Photograph

An Outpost in Cyprus.

PREVENTIVE DENTISTRY IS PREVENTION + TREATMENT

THE KEY TO SUCCESS ...

- ★ fluoride protection
 - ★ annual recall
 - ★ achieve fitness
 - ★ maintain fitness
- 

THE MILITARY CONCEPT

Major JVP Chatwin, CD, DDS, DDPH



What do we mean when we speak of Preventive Dentistry? The word prevention itself is some 2,000 years old meaning at that time "to come before", evolving with the passage of years until it has come to mean "stopping something happening". Stopping something happening when applied to dentistry becomes a philosophy of practice which is discussed in over a dozen current textbooks and literally hundreds of articles. When the educators speak of Preventive Dentistry they are really talking about comprehensive dentistry. They associate two aspects, prevention plus treatment, with the concept. No program can hope to succeed without involving both these components.

The RCDC program incorporates both prevention and treatment and we are very fortunate that we have a number of positive factors on our side. There has been time to assess the work of others and hopefully to side-step the traps. We have an excellent dentist/patient ratio and a decreasing service commitment. There is a built-in accounting system without which a program cannot work and a period is set aside each week for treatment. On paper the Corps meets the formula for Preventive Dentistry as do all the US Services but there is one cardinal difference--patient selection. Treat the man who needs the lesser amount of clinical time first--make him fit and then keep him in that condition for the remainder of his Service career by means of an annual birthday recall. Finally, the Corps defines a state of dental fitness, which while not optimal by civilian preventive dentistry standards, is practical, attainable and offers for the first time a goal to aim for.

The question today is not whether it is possible to prevent caries but rather how to best apply the preventive measures available to the profession. Nowhere is there better documented evidence of the impossibility of meeting the dental needs of a population than in the recently distributed Report on the Dental Condition of the Canadian Forces. We have one dentist for each 750 men; a ratio better than four times as favourable as found in the civilian community. We have in the past devoted almost 80% of our treatment operations to restorative procedures, yet we found we had only reduced the backlog of treatment among serving members by 1/3. We have no hope of achieving a dentally-fit force using the treatment approach alone.

In 1963 the US Navy made a significant finding from which they developed their Preventive Dentistry Program and the Corps has applied the preventive aspects of that program to the RCDC program. Captain Grossman of the USN tells the story.

The US Navy found after two years of careful study at the Naval Submarine Base, New London, Connecticut, that there was strong evidence that they could markedly reduce the incidence of caries in a military age population. Upwards of a 70% reduction in carious increment was observed in young adult naval personnel after 6, 12, 18, and 24 months using a 3-agent cariostatic treatment procedure consisting of

* Editor's Note

Extracts from a presentation at the Preventive Dentistry Workshop held in Trenton in Sep 1969.

an annual prophylaxis, a topical application of aqueous SnF₂, followed by the daily use of a fluoride dentifrice. This study was important for several reasons:

1. It reinforced the findings of other investigators that stannous fluoride is an effective cariostatic agent for young adults.
2. SnF₂ was found to be more effective if used in three ways because each has an additive effect.
3. A 15-second topical application was found to be as effective as a 4-minute application.

The next step was to reduce the time needed for the prophylaxis.

As early as 1951 the Swedes had shown that children under supervision could clean the crowns of their own teeth and when this was followed with a topical fluoride, real benefit accrued. The US Navy applied the concept to young adults and Foster found that carefully coached patients could and did get the crowns of their teeth essentially as clean in 10 minutes using an ordinary toothbrush and the special pumice paste containing SnF₂ as did the average dental auxiliary using an engine-driven rubber cup.

Using the self-preparation we can multiply the numbers we can provide preventive benefits to within the same time frame by 6 or 8 times over the conventional one-to-one approach. What are the benefits in time and money to the Corps? Again US Navy studies give the answers. Incorporating the self-preparation method the US Corpsman raised his production from 2,000 to 12,000 men per year, doing six men in the time he formerly used to do one.

The caries increment in US Naval personnel averaged 2 plus DMFS per year. Studies showed that they could prevent at least one lesion per year. The average USN dentist places about 200 restorations per month, or a minimum of 2,000 per year. It can readily be calculated that one auxiliary using the technique described can prevent six times as many carious lesions per year as a dentist can correct in one year if the lesions are allowed to develop. One dental auxiliary can, in one year, prevent as many lesions as six dentists working full time can correct. Thus, the new program should substantially reduce the backlog of untreated caries.

There are side benefits too. Many hours have been expended in giving lectures with little change in the oral health habits of the average serviceman.

An essential but missing step in our educational efforts for developing desirable habits and attitudes has been patient involvement. With self-preparation, the patient becomes intimately involved in the treatment procedure. A dentist or a therapist can do one prophylaxis and a topical fluoride application in about one hour. Using the self-preparation method they can do the whole exercise plus an examination for six men and still have a few minutes left in the hour to instruct the group in home care. Here our health education efforts in the group situation can be rewarding.

In the Corps, using self-preparation, there are two group sizes we talk about. The small group method (6-8 men) and the large or blitz method with size determined by the numbers of parentals to supervise the sub-groups. Certainly, control effectiveness fluctuates in direct relationship to the group size--the smaller the group the better the control. Using paper products it only requires initiative to adapt the method to fit the situation.

APF wetting agent is recommended for the pumice. Brushing with SnF₂ can be a traumatic experience. The USN did a Subject Acceptance Study of the SnF₂ self-treatment--59% said the SnF₂ did not taste bad, 32% said it did and 5% said it tasted very bad. The USN continues with SnF₂ because they argue the involvement factor is

valuable. The taste does nothing for our image and since we are primarily interested in cleansing rather than cariostasis in this first step APF is preferred.

The topical application should be 10% SnF₂ which has been proven effective in 15 seconds. One arch is done at a time in most cases. APF can certainly be used. This is a matter of professional choice. It will, it is felt, prove to be as effective in 15 seconds as is SnF₂ but testing is slow. Not many years ago we applied fluoride for four minutes per quadrant three times a year. It was supposedly only effective in youngsters. Today 15 seconds once a year is effective up to 24 years of age.

Finally we recommend home use of the fluoride toothpastes on the basis that they are replacing to a degree the fluoride that is leached out of the enamel with time. If our patients are going to brush their teeth at home they might as well take advantage of this compensating effect.

One large problem area remains. To be effective fluoride must be applied annually. If we do not re-involve this year all those who had a treatment last year the effect is gone and we are back where we started. It's up to the base or unit preventive dentistry officers to program the personnel through each year.

Another problem area is the recently enlisted man. The increasing shortage of professional dental manpower and the increasing cost of treatment accentuates the problem presented to us at enrolment. A public health measure is needed and the recruit is ideally suited to our program. He needs, on the average, a lot of work and if we can keep him from slipping back by preventive treatment until we can get around to treating him we can control the backlog. With the treatment phase being initiated at Cornwallis the recruit picture is brightening.

The preventive measures we have discussed will give us a big boost towards the goal of a dentally-fit force, but without the treatment phase the Corps can not reach that goal.

There have been treatment oriented plans in the past. Perhaps the best known is the categorization plan. Groups were screened and sometimes detailed examinations were performed. Categories were assigned and some effort was made to move people up the scale. Little restorative treatment resulted but lots of teeth were extracted. No long-term useful purpose was served and our image, especially in the recruit centre, suffered often for the man's whole Service career. The backlog is too great and maintenance care is a continuing problem. Deterioration and new DMF surfaces, will always be with the profession and any treatment plan that does not incorporate maintenance care has no hope of success.

The mechanics of the treatment phase of the Corps plan are known. From the examination we colour-code the chart and raise blues to red each week, while maintaining those personnel who are dentally fit in that condition by means of an annual birthday-month recall.

This annual recall includes the maintenance care. The treatment concept, however, meets with resistance among some officers, and it all boils down to patient selection.

Fee and time study schedules prove the value of treating the man with minimal requirements first. It's more economical in all respects to treat the cavity rather than leave it and then face the root canal--extraction--replacement sequence. We can raise an argument when we apply this concept to a comparison of a young serviceman and a 25 year major needing a bridge. Who most deserves our treatment time? Patient selection is a difficult subject but we must accept two facts: Under the voluntary approach we made no headway at all--a reduction from 9 to 6 hours. Secondly with the existing laboratory resources we can never hope to do all the prosthetic work facing us. Our treatment priorities can be listed in order of magnitude:

restorative, periodontal, prosthetic. In a military service the first is the one which cripples force effectiveness. The RCDC program will whip the first with benefit to the second and certainly our existing laboratory capability can continue to handle a satisfactory degree of prosthetic treatment.

Understandably, due to dispersion, many "users" are not sure of where the Corps is going and in some cases that there is even a need to change existing patterns. A few extracts from the evaluation reports show this fact clearly.

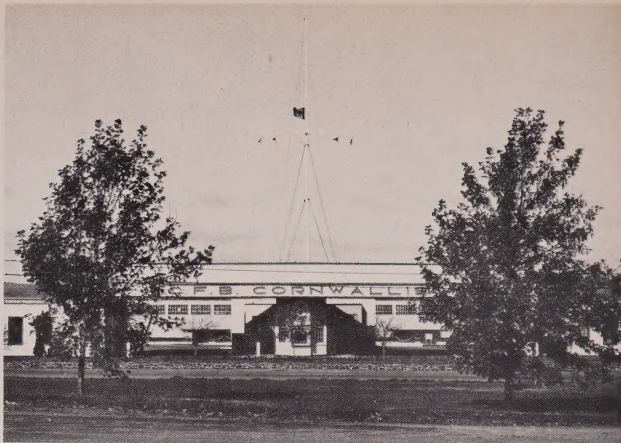
1. "Skeptical of the program in that it appeared as if the dental officers are concentrating on one particular group of service people while neglecting others."
 - We are neglecting no one. With the holding action of fluoride we are extending treatment to the great majority of the force each year and definitive treatment will be available to all with time, something never possible before.
2. "Resistance to the self-prep. arises from the 'Public Health atmosphere' of this approach."
 - No break-through in any health project has come without a public health approach. TB, salk vaccine, the US Navy Brush-In are all examples.
3. "Combination of regular appointments and requirements under the treatment phase of the program results in booking months ahead."
 - There is no intention of involving all those who participate in the preventive phase in the treatment program initially. The Corps could not keep up when we were booked months ahead and working 5½ days a week. The preventive phase stabilizes the serviceman's condition to a degree for a year and the examination serves only as an aid in patient selection for treatment; a specified percentage of hours each week.
4. "Operators will be working just to keep up with the requirements of dentally fit personnel."
 - This is the ultimate aim of dentistry. When the Corps arrives, as we will in a few years, at a maintenance oriented force we will have reached dentistry's goal.



CANADIAN FUND FOR DENTAL EDUCATION

THE RECRUIT CENTER

LCOL JMA Donely, CD, DDS



HMCS Cornwallis was, from 1942 to integration, the main training ship of the RCN and as such its primary function was the training of recruits.

With unification of the Canadian Forces the role of CFB Cornwallis has changed little. Since July of 1968, when the Canadian Forces Recruit School was formed, the basic training of all English speaking recruits for the three elements of the Canadian Forces has been conducted here.

Recruit training is presently of eight weeks duration, with a new course of approximately eighty men commencing each Monday. A class of female recruits begins every nine weeks for a duration of eight weeks and numbers approximately sixty.

Originally, with naval trainees, the dental emphasis was placed on treatment since many of the recruit graduates were immediately posted to ships. An attempt was made to place these men in Category 11 condition before departing. Thus a large portion of treatment consisted of surgery and prosthodontics.

The present role of the dental facility has changed greatly with the emphasis now, as throughout the Corps, on preventive dentistry.

During the winter and spring of 1969 the old dental clinic plus a portion of the base hospital were completely revamped to provide facilities for a 60 seat lecture room, a self-preparation clinic to accommodate 12 recruits, a laboratory and a 14 chair clinic.

The staff consists of seven dental officers, three therapists, ten dental assistants and two laboratory technicians.

There are three basic programs running concurrently:

1. "In Routine Preventive Program" for recruits,
2. "Recruit Holdover Program", and
3. "Base Preventive Program".

The "In Routine" Program begins with a forty-five minute lecture on Monday afternoon to all new recruits. This is given by the therapists on a rotational basis and includes correction of any errors on the dental documents and completion of the patient history questionnaire (Serial 2 of the DND 422 Dental Record). This is accomplished by using Visu Graphs as a training aid. A few minutes is then spent on the role of the RCDC, Service sick parade routines, and an explanation of what will be done for the recruits during their stay at Cornwallis.

With motivation in mind, the various aspects of the Preventive Program and the reasons for each are explained i.e. self-preparation, topical application of a fluoride agent, the design of a toothbrush and the use of a fluoride toothpaste. This is then followed with a demonstration of correct brushing procedures using a brushing chart and a large typodont. The recruits are then programmed through the clinic on Monday afternoon and Tuesday morning in groups of up to forty individuals. Each group is further divided into three sub-groups and phased through the following four stages which operate concurrently:

Stage 1 - Self-Preparation Clinic

On entering this stage all recruits are given a cursory examination for gingival lesions which might preclude fluoride application. The therapists are responsible for supervision of this phase on a rotational basis. Considerable enthusiasm is lost if an individual continually repeats himself. Since the recruits have previously been shown the brushing technique, only a quick review is necessary at this time.

Stage 11 - Examination

The examination is carried out by two dental officers with dental assistants for charting and is the only portion of the recruit program completed by dental officers.

Stage 111 - Topical Application

Acidulated phosphate fluoride is being used for this procedure for convenience and patient acceptance. All dental assistants are trained in the procedure and two per week are assigned for this duty.

Stage IV - X-Ray

A therapist takes two posterior bite wings of every recruit. A Panorex x-ray has recently been installed and the therapist staff trained in its use. Shortly, a Panorex film will be taken of each recruit during his training at Cornwallis which will then follow him throughout his service career and form a more permanent record of his dental condition on enlistment.

The examining dental officers are responsible for transferring the radiographic findings to the dental records and noting the patients colour code on the dental envelope plus the approximate treatment time required for blue chart personnel.

To reinforce this program, a film on oral hygiene is shown to the recruits late in their second week of training.

The Recruit Holdover Program involves the blue chart or minimal treatment recruit and all of the Communication Research trade. The dental staff has authority to hold back for one week following graduation, up to forty blue chart recruits for definitive treatment. The Communication Research trade personnel are posted from Cornwallis to CFS Gloucester for trades training. With the limited dental facilities at Gloucester and the fact that these men are posted from there to isolated units (e.g. Alert) recruits of this trade may be held back for two weeks following graduation, regardless of their dental condition, to make them dentally fit. Recently this has been averaging about fifteen men a month.

During the recruits' fourth week of training, a list is made of the personnel to be held back for the one or two week period. This is sent by signal to Training Command HQ who then deletes the names of personnel who, as a result of the hold back, would be unable to commence trades training on schedule. TCHQ adjusts the posting instructions (COS date) to reflect the additional time allowed for these recruits to receive dental treatment in Cornwallis. The confirmed list is then made available

to the dental staff the following week. Since the number of appointments required for hold backs has previously been ascertained, it is relatively easy to program these patients to the dental officers. Once the recruit is held for dental treatment, he becomes the responsibility of the Base Holding Unit. A master appointment schedule for the following week is passed to them every Thursday. They ensure that the patients are available for treatment at the prescribed times.

The time remaining from the recruit program is devoted to the Base Preventive Program which involves the permanent staff on the base.

The benefits of the recruit facility are very apparant. Recruits are now passing on to their environmental training having received the benefits of the preventive phase of the RCDC Program and in many cases dentally fit.

THE SERVICE COLLEGE

Captain TJ Erskine, DDS



The clinic at Royal Roads services three hundred cadets and military staff. The patients are mainly between the ages of seventeen and twenty-one years, in excellent physical health and subject to all the emotional stress of college life plus a considerable strain imposed by a heavy commitment to military training and athletics.

As may be expected when examining recruits, a high incidence of gingivitis (close to 60%) was noted. Speculation on causative factors would include the suggestion that these boys had been under a good deal of strain and that their routines of brushing had been upset due to travel. Anyone who has had the privilege of watching the pre-course routine unfold will testify that the cadets have little time to eat and less to brush.

The new cadets became part of a special study being conducted by the Royal Canadian Dental Corps. Brigadier-General Kearney and Major Chatwin addressed the cadets and gave them their first information on preventive dentistry as practised in the Canadian Forces. In one day the entire junior class was given a dental examination, x-rayed, allowed to do a self-preparation and, in selected cases, given a topical fluoride application. The study divided the cadets into three groups. Two groups received slightly different fluoride topicals and the third group was the control and received no fluoride. These cadets will be examined in the fall of 1969 to determine which group benefited most during the one year interval. Despite the fact that one-third of the cadets did not receive all the elements of the Preventive Dentistry Program, they were all classified as "red", (no treatment required), "blue" (less than 3 hours of treatment required), or "no category" (more than 3 hours of treatment required) and treatment was given to upgrade them during the year.

Since the initiation of the Preventive Dentistry Program emphasis has shifted from the "dental cripple" to the relatively caries free serviceman. Clinic routines were re-oriented, to seek out and treat the "blues" and at the end of March a survey of charts showed these results:

	<u>Junior Cadets</u>	<u>Senior Cadets</u>
Red	19%	40%
Blue	37%	52%
No Category	44%	8%

The cadets in the blue category averaged three restorations needed per man. The most striking feature is the disparity between the numbers of first and second year cadets in the "no category" area.

All cadets have been fitted with the vinyl mouthguards and instructed in their care. However, a survey showed that only 15% of the cadets used the mouthguard routinely and only another 25% used them more than half the time. The Physical Education staff was fitted with the guards to evaluate them and hopefully encourage wider use of the device.

In the second term three fractured incisors were treated, however, none were fractured during contact sports. A fractured condylar neck received during a rugby game was treated by the oral surgeon, Major Eadon. The cadet was not wearing his mouthguard and it has not been clearly determined how the blow was delivered. No witnesses.

Only the Junior B hockey players must wear their mouthguards as a condition of play. This is done for insurance reasons and the referee is responsible for checking to see that the players at least start the game with mouthguards.

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THE STATIC BASE

Major JF Begin, BA, DDS



The introduction of any type of dental program depends for its success on many factors. One thinks of the type of base, the dental manpower and their motivation, the attitude of the section heads and the base commander, the time involved, the background evaluation of the problem and the efficient implementation of the solutions.

The aim of this article is to examine some of the problems involved in the implementation of the preventive philosophy on what could be termed a static base, i.e., a base with a relatively permanent strength, the only movement of personnel being those on summer postings, T.D., courses or leave, as opposed to an arms base where troops move out periodically on training exercises and where groups of people can more readily be treated by sections or sub-units.

Since no two bases are exactly alike, the program should have a practical application based on local situations. Base Winnipeg is unique in that it houses not only the base itself with its HQ and the various sections such as aircraft maintenance repair and servicing, supply, engineering, transport, etc., but it also has the Air Navigation School, and the Central Flying and Navigation School. Training Command HQ is here, as are units of Mobile and Transport Commands. Winnipeg also houses fourteen lodger units such as HQ Prairie Command, Prairie Region Medical HQ, HMCS Chippawa, etc., and is also home for approximately eleven other miscellaneous and smaller units.

Needless to say during this time as well as subsequently, the Base Commander, the Commander Training Command and all commanding officers of units and section heads were kept informed of our intentions and proceedings by means of circular letters and by direct contact. Dental staff meetings allowed a forum for exchange of ideas and for defining duties and responsibilities, and as a result, the full support and enthusiasm of clinic personnel was gained and maintained.

Since the clinic had the manpower available to see base personnel on a man for man basis, it was decided to postpone self-preparation until the second year of the program. The two most pressing questions to be answered prior to the Preventive Program were:

- a. what orderly room control and documentation procedures would be most efficient?
- b. in what manner would the patients be contacted or recalled?

In answer to the first question it was originally thought that patients could be brought in by units or sections, but this would have adversely affected the operational role of many smaller sections by depleting them of their strength. The least disruptive way would have to be found. Also no real support was gained for the idea of grouping personnel according to age. Many patients are already in the habit of an annual medical examination in the month of their birth and, as the dental clinic is situated in the base hospital, it was finally decided to divide the filing system into twelve drawers, one for each month of the year, with an alphabetical cross-index file for reference. The advantages of the month of birth filing and recall system are:

- a. the dental staff knows exactly the work load in each month in relation to the manpower available and thus the work month can be planned in advance to achieve a goal each month;
- b. having already classified all patients, we could start with Category III patients and reserve the end of the month for lower categories;
- c. easy for personnel to remember;
- d. least disruptive for all sections and units; and
- e. easy orderly room control.

It was planned at first to have the actual recall of patients published in Daily Routine Orders as a list of those who were to report each day. This idea was soon dropped when it was realized that the dental staff would never really know how many were available because of leave, temporary duty and courses. The idea of having a Duty NCO (non-dental) call in patients would also leave too much uncertainty and we would lose control. A notice in Daily Routine Orders to have people call in the month of their birth also left too great a margin for delinquency. The only certain way of knowing that every patient had been notified was to have the dental assistant call each patient personally and set up a definite appointment. This method proved effective, is appreciated by the patient, and leaves very little margin for error. Patients away when called are contacted the following month. The only disadvantage is that people transferred in after the month of their birth would normally have to wait until the following year to be seen. These people, however, receive care as required.

Other problems soon became evident for which solutions could not be delayed.

a. Scheduling Recalls

The manner of scheduling recalls could take many forms. If an average

of 150-170 Phase I were to be performed each month we couldn't limit each operator to one day a week. At the beginning and for the six first months of the program the first week of each month was set aside almost exclusively for Phase I, which then allowed three weeks per month for follow-up routine work. Later each operator was told to schedule his quota whichever way he preferred - one day a week, two patients a day, mornings only, etc.

b. Treatment

During the first few months an effort was made to treat all patients in each month for restorative work as well as Phase I, but it was realized that the work load was too great and the clinic staff's leave and temporary duty schedule prevented it. Also it was unfair to make patients wait until the month of their birth for regular work, especially in the field of prosthetics and periodontics. The final arrangement reached was that the maximum number of Phase I would be performed in each month of birth and as many Blues made Red as possible, but not exclusive of patients requesting needed routine care.

c. Identification of Charts

The dental assistants were frustrated by the duplication of recalls since no provision had been made to distinguish between charts of patients with Phase I completed but neither Red or Blue and those who had not as yet been contacted. It was decided to add the color code "yellow" for those patients requiring more than three hours work and the dental assistants would henceforth examine each document before contacting patients in order to give only 15 minute appointments to edentulous patients, $\frac{1}{2}$ hour to patients with one denture and a full hour to those with a natural dentition.

d. Oral Hygiene Instruction

The standardizing of each operator's approach to oral hygiene instruction met with only partial success following a whole afternoon's symposium and a day of viewing and discussing oral hygiene instruction films. The views expressed depended on which dental school one attended. The preventive philosophy was well accepted but minor differences of opinion remained as to the practical approach to its teaching.

e. Control of Appointments

Operators' appointment books tended to fill far in advance with "Blue's" and routine work so that very specific times and continual surveillance was necessary to assure that the month's quota was reached.

f. Availability of Staff

The loss of one therapist half way through the program because of surgery and her return to partial duty necessitated that the level 7 therapist revert to a preventive role which, though it maintained the quota of Phase I treatment, decreased the monthly number of Blues made Red.

g. Leave Schedules

The summer postings and holiday schedule in July and August reduced the dental staff and impaired the patient response. The problem was solved by grouping "Jun-Jul" and "Aug-Sep" as combined months to assure maximum availability of patients.

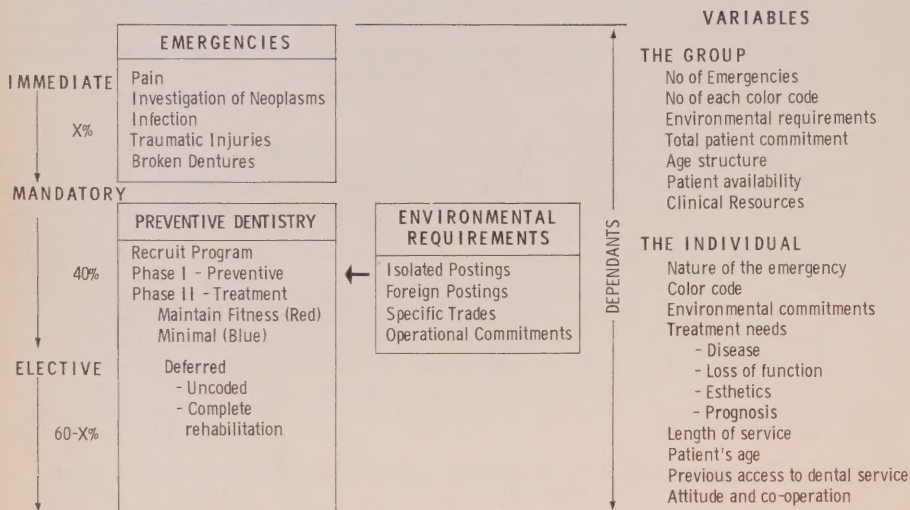
In the first year of the Preventive Dentistry Program the personnel of No 2 Dental Clinic, Winnipeg, with a patient commitment of 2,100, examined 2,050 patients, performed Phase I treatments on 1,827, and brought 983 into the Red category.

As the second year of the program commenced, the first week of each month was left free of appointments in all appointment books. The new initiative was to complete Phase I in detail on approximately 170 patients and maintain approximately 82 Red chart patients dentally fit. Patients were programmed 35 per day for the five days with any work required to maintain a fitness performed at the same appointment. The self-preparation technique is being used in each operatory at the discretion of the DO but since time permits, the man to man approach rather than group therapy is used. The disclosing tablets or solution is used as well as topical SnF2.

Summary

- During the first year of the program, every person on the base was contacted directly or through his section and 87% reported as scheduled for Phase I. Of these, 53% were made dentally fit.
- The nature of the base dictates the manner in which the program is implemented. The approach would no doubt be different on a recruit base or an arms base, but the end results should be the same.
- It is essential that the base commander and his staff be informed and motivated towards the program and kept abreast of the results.
- The complete support of the dental staff is imperative. Their enthusiasm, initiative and sustained interest must be maintained.

PRIORITIES FOR DENTAL CARE



THE LAND FORCE

Major TD Cobb, EM, CD, DDS



The benefits of an annual application of stannous fluoride to the teeth are well known. The excellent results obtained by the US Forces in their program indicate beyond all doubt that the concept must be a priority one in the improvement of service dental health.

The objective, the method, and the specific formulae of solutions and pastes have all been clearly laid down and circulated within the RCDC. It is not the intention of this paper to cover these aspects again but to offer some views on what appears to be the big stumbling block i.e. "getting the patients in the dental chair". None of the theories, good intentions, or materials are worth anything until the fluoride solution is actually applied to the teeth. This is the point in time when an effective protection begins.

The present concept is based on a regular force of approximately 85,000. If, as is intended, they all receive an annual topical application of a fluoride solution approximately 7,500 persons must be treated every month. (Allowance has been made for the inevitable Christmas -- New Year season, leave periods, etc.) 7,500 is a formidable figure. If we are to approach this, we must think in terms of mass production or assembly line methods using the self-preparation technique.

How to Get the Men

In the early stages of the program at CFB Galetown, attempts were made to obtain personnel from a unit by forwarding lists of names from clinic files to the unit. This failed completely. One must realize that units have training and other functions which are important to them. If one or two men are pulled from each of the many different training activities the unit activity suffers and cooperation becomes limited or non-existent. The answer seems to be, use the natural breakdown of companies, batteries, troops, etc. It is relatively easy to secure a commanding officer's cooperation when he can fit the dental program into his own operational or training program. If the whole of No 4 Platoon reports to the dental clinic at 1400, Thursday what does it matter if two men have complete dentures out of a strength of 32? No 4 Platoon has been processed and proceeds on with its training at full strength. An additional advantage is the arrival and departure from the clinic under unit control e.g. Platoon Officer or SGT. This applies to gun sections, tank troops, squadrons, -- the list is endless.

Many units are dispersed through various offices and installations, e.g. pay and communications personnel, clerks, repair and maintenance personnel. In these instances, the approach may be grouping of personnel by shifts or watches. All personnel coming off the night shift in a message center for example can proceed to the dental clinic at 0830. There are many variations on this. The essential point is using the breakdown into groups as seen by the unit concerned. Pay parades seem to turn up personnel apparently unavailable at any other time and the arrangement of a preventive clinic immediately following a few of these is a productive device.

Clinic Organization

It has been found in the Gagetown clinic, that 50 men can be processed in a two-hour period without confusion and maintain order throughout. This is accomplished using a staff of two dental officers, two senior NCO's and two dental assistants as follows:

- a. The first group (approx 25) are given a short talk by a dental officer explaining the object and the method to be used.
- b. The men are then taken in groups of nine to the washroom (nine basins or sinks at this location) where they clean their teeth with a prophylactic paste under direct supervision of a therapist. On completion of this procedure each man is given an x-ray envelope by the therapist.
- c. The group of nine then proceeds to a two-chair dental bay where they receive their topical application of stannous fluoride and are classified (Red, Blue, or uncoded) by the dental officers. The dental assistant writes the man's name on his x-ray envelope and also writes the color classification in the corner.
- d. Each man proceeds to the x-ray room with his envelope where bitewing films are taken and placed in the x-ray envelope which is retained by the x-ray technician.
- e. The men then join their group outside the clinic and march off.

Since there are over 4,000 dental charts on file, no charts are drawn from the files until the following day when the films are developed and read. This saves time when the personnel are in the clinic for their preventive treatment thus shortening their time away from duty or training. The x-ray envelope is the key and ensures an orderly steady flow with a minimum of paper or forms used at the time of treatment.

When the films are processed, read and placed with the individual's chart the following day, the man's name is checked on a copy of his unit's nominal roll.

The system described above applies to CFB Gagetown but may be modified as personnel and facilities demand. The essential feature is the non-use of dental charts during the process. This eliminates all the slowing down by paper work at the time treatment is rendered, and in fact it is not necessary to know in advance the names of personnel who will be arriving.

Summary

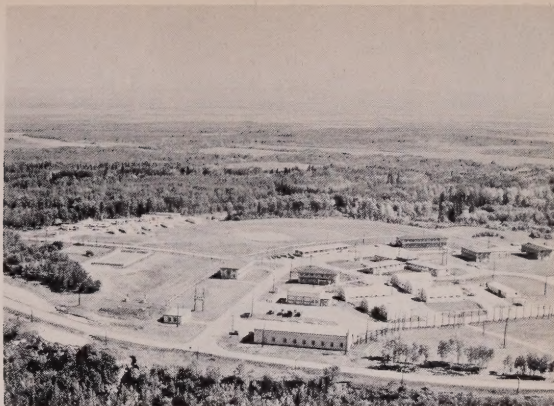
The approach used to process the maximum number of servicemen through Phase 1 of the preventive dentistry program at CFB Gagetown has been described. The success achieved at this base depends on the following three points:

- a. Discuss the plan with the unit commanding officer - in person.
- b. Use a breakdown of personnel into groups suitable to their commitments, disregarding age and dental condition of the personnel. Process them all. Edentulous personnel can be eliminated at the preventive clinic.
- c. Ensure a systematic, and rapid flow of patients through the preventive routine with a minimum of paper work at the scene to enable personnel to return to duty on schedule.

This approach is not applicable to the annual recall of dentally fit personnel.

THE ISOLATED LOCATION

Major WR Collier, DDS
Sergeant BA Green
Corporal RC North



CFS Beaverlodge is a radar station which became operational in February 1953 as the 919th Aircraft Control and Warning Squadron USAF and was taken over by the RCAF on April 1, 1963. The station comprises 215 acres and is situated atop Saskatoon Mountain, (elevation 3,200 ft), in the South Peace agricultural region of Alberta. The closest towns are Grande Prairie 27 miles east, Beaverlodge 14 miles west and Dawson Creek, BC 65 miles north-west. The mean winter temperature is - 6 degrees F. During this visit the mean temperature was 40 degrees below, and ranged from 55 degrees below zero to 25 below. The average snow-fall is 59 inches.

The station has a 24-hour-per-day operational mission and during 68/69 participated in at least 40 exercises which accounted for approximately 5,800 man hours. When these commitments are added to courses, trade training and temporary duty, the very heavy demands placed upon a station with strength of only 10 officers, 19 senior NCOs and WOs and 91 CPLs and PTEs, are readily apparent.

For this reason the dental treatment policy was devised to provide the maximum amount of treatment with the least amount of interference with the operational role. This was accomplished in the following manner:

SGT Brian Green, one of the equipment repair men from Edmonton, checked out the dental equipment and in one day he not only had the x-ray machine operating properly but also, with the judicious use of masking tape, had the unit operating satisfactorily.

The Station Commander, Major RS Park was on leave, and liaison was made with the Acting Commander, Captain MG Ramage, and with the Personnel Administrative Officer, LT KW McNichol. The following plan was developed:

- a. because of the nature of the function of station personnel, it was decided that it would be impossible to take groups of men for the self-preparation technique and therefore individual appointments would be required;
- b. the administrative staff, being aware of the exact types and times of duty of every member of the station, volunteered to arrange all appointments and to ensure that they were kept. This they accomplished by making every dental appointment the equivalent of a Commanding Officer's parade, which meant that all the dental team had to do was provide treatment and maintain records.

On checking the supplies it was noted that the fluoride had precipitated extensively, so for the first few days the team concentrated on getting as many patients as possible dentally fit and fluoridate them later when a fresh supply

arrived from Edmonton.

For the first two days visual, digital and roentgenographic examinations were made on as many patients as possible. At night CPL North processed the x-rays, and MAJ Collier examined them, which made it possible to predetermine the number of appointments and the time required for each. This information was passed to the station Pers Adm O who, with his staff, ensured that the dentals never had an idle moment.

Appointment times ran from 0800 hrs to 1630 hrs and, with the cooperation of the living-in personnel, evening appointments were made from 1800 hrs to 2100 hrs.

The following technique was employed:

At least one, and in many cases two quadrants were completed during each appointment. Immediately following the injection of anaesthetic, a scaling and fluoride prophylaxis were performed. The restorations in the anaesthetized quadrants were then completed and the patient was referred to CPL North for the topical application of fluoride.

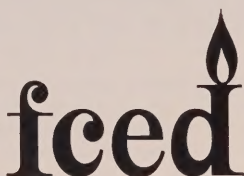
The following statistics reflect the success of this procedure:

Station strength	127
Number of appointments	304
Number of operations	861
Number of Phase I examinations	115
Number of charts Red tagged	105
Number of charts Blue tagged	10
Personnel not seen due to leave, course or temporary duty	12
Percent of station strength placed in Red tagged file	83%
Number of working days	17

The cooperation received from the Station CO, Major RS Park and his staff was excellent and these figures show what can be accomplished under such circumstances with a crash program for a captive audience.

The most beneficial time of year to conduct a program of this type is in September and October, as most of the postings have been completed and summer holidays are over. A follow-up visit should be made in April.

Approximately 40 percent of the personnel move from one radar site to another and hence, if this type of program could be carried out at all such locations in Canada, the workload of the visiting team would eventually be greatly reduced, and personnel in these isolated stations would be assured of receiving adequate dental care.



FONDS CANADIEN POUR FINS D'EDUCATION

EN ART DENTAIRE

THE LARGE GROUPS

LCOL DH Hillier, DDS, MPH, CD



A most worthwhile learning situation can be experienced from involvement in a simplified program which produces worthwhile results in a significantly shorter time than was heretofore possible. Such was the experience of the dental staff at CFB Vancouver (Chilliwack) when, in five hours seven dental personnel provided 230 cadets with up to 50 percent protection from dental caries for one year.

The methodology of self-preparation and topical application of fluoride solution has been documented elsewhere. Its efficacy is well established and the procedure should now be part of clinical practice. The application of this technique to large numbers may not, however, be as widely appreciated.

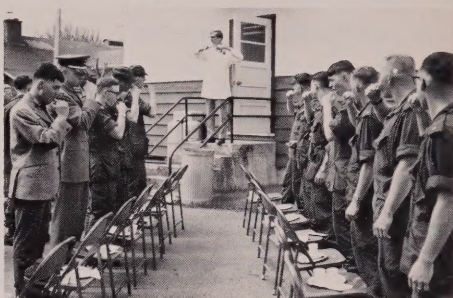
It is the intention of the RCDC to provide all suitable personnel of the Canadian Armed Forces with fluoride protection on an annual basis. In most instances personnel are situated at locations served, at least periodically, by a dental detachment, and it is the responsibility of that detachment to provide this treatment. Officer cadets attending civilian universities are not so situated, and hence special arrangements were made to render them this service during summer training at Chilliwack. The program was conducted during the weekend of 10-11 May and Major JVP Chatwin from DGDS and LCOL Hillier from HQ 11 Dent Unit provided instruction and exercised supervision. Administrative details were assigned and completed by the three levels of command.

The dental staff at Chilliwack had not previously received instruction in the methodology of self-preparation and, before the program, their overall attitude can best be described as co-operative scepticism. They had been told to arrange for a "Brush-In", or self-preparation and topical application of acidified phosphate fluoride solution on a schedule of 40 cadets every two hours. From their experience in providing Phase I treatment under the RCDC Preventive Program, such an optimistic goal appeared unattainable. Such was their belief, and even the introductory lecture and slide presentation failed to convince them completely.

Following the briefing, the supplies provided through DGDS were checked, and the weather being favourable, it was decided to conduct the self-preparation outdoors. Chilliwack is ideally situated for this type of exercise, with a parking lot immediately behind the clinic, which is itself relatively isolated and thus free of curious onlookers, particularly over the weekend. Following the self-preparation, the cadets were to file in the back door of the clinic and three cubicles equipped with units would be used to apply the APF solution. Major Chatwin explained that the solution was to be applied for only 15 seconds and that, wherever possible, the complete arch would be treated as one unit. This departure from the more usual one-minute and four quadrant approach provided some assurance to the staff that the pile-up of patients might not be as bad as they had anticipated.

The entire staff was present at 0730 hrs on Saturday morning. Forty-two chairs were arranged in three spokes of twin rows of seven chairs back to back, with an aisle in the center of each spoke for a demonstrator to observe and correct the brushing technique of fourteen cadets. A paper plate containing two disposable cups, a dental health kit, napkin and a supply of pumice mixed with APF solution, was

placed on each chair. Inside the clinic the cubicles had been provided with cotton-tipped applicator sticks, APF solution and cotton rolls. Just as all these arrangements had been checked, the first platoon of cadets was paraded to the back of the clinic area.



Major Nesbitt, Captain Shearer and Miss Whebell acted as demonstrators and Major Chatwin as over-all supervisor of the self-preparation. He had the cadets gather around him for a short briefing on what was about to happen and the benefits to be gained by the exercise. Just as he was about to begin, the entire operation was suspended as the strains of "O Canada" emanated from a strategically situated loud-speaker. The interruption could not have been better timed, and proved to be a good omen for the success of the program.

When Major Chatwin had recovered from the surprise of this musical prelude, he presented his opening remarks, after which he had the cadets line-up in front of the chairs and the self-preparation was carried out. The topical application was then provided by the entire staff, who relieved each other at regular intervals.

As each group was completed, the cadets filed out through the front of the clinic, picked up the paper plates and other supplies which had been laid out in the waiting room and placed them on the chairs for the next group. They also provided a garbage detail, and hence the area was kept clean.

Probably the greatest surprise to the clinic staff occurred when, at 0830 hrs, it became apparent that the first group of 40 cadets would be completed in a few minutes. A phone call produced the second platoon at 0845 hrs instead of 1000 hrs as originally scheduled, and the entire procedure was repeated. Thus it went for the entire morning. The only slight difficulty was that the base administrative staff became so convinced that the dentals were miracle workers they sent two platoons within fifteen minutes of each other. This was just a bit too much for even the, by now, thoroughly convinced Major Nesbitt, and the second group was told to break off and relax under the trees.

Following the first self-preparation exercise, various personnel were appointed as supervisors, and by the end of the day the majority of the clinic staff, including CPL Armstrong, had served in this capacity. By lunch time, only one group remained to be processed and the exercise was complete at 1430 hrs, at which time a debriefing was held.

In reviewing the experience at Chilliwack, several factors are noteworthy. The rapidity of processing was largely due to the detailed preparations and the positive, enthusiastic attitude of the clinic staff. They demonstrated clearly, that any failure to complete the exercise within the time allotted would not be through lack of effort on their part. The co-operation of the base personnel and the cadets was also commendable.

Another factor which reduced the time requirement was the absence of any documentation or formal examination. The emphasis was on the "group" and not the "individual", which is the Public Health approach as differentiated from the more commonly utilized dentist-patient relationship.

Although in this instance 200 dental kits containing toothbrush, paste, and disclosing tablets were provided by DGDS, it was possible, through the unanticipated turnout of 230 cadets, to demonstrate that this program is not dependant on such supplies. The final 30 cadets were instructed to bring their own brush, (only one failed to do so), and the paper plates, cups, etc, were taken from clinic stocks or substituted for.

The almost tasteless APF solution failed to provoke any adverse comments from the cadets, who were most appreciative of the service that had been provided for them. No refusals of the treatment were received and queries concerning regular dental appointments were referred to the platoon sergeants. This fact is mentioned to point up the complete adherence to the Public Health approach, which will suffer appreciably if the patient-dentist relationship is allowed to intrude.

The conducting officers left Chilliwack convinced that the positive benefits of fluoride therapy had been demonstrated to the cadets, and that the clinical staff were truly enthusiastic about this approach for giving selected and large groups the benefit of fluoride therapy.

CANADIAN FORCES BASE COLD LAKE COURIER



"...n 'after we've all brushed our tooffy ' pegs, the nice Warrant Officer will tuck us all into beddy ' byes like big sojers ----"

RAY CRYDERMAN



Dear Ma:

A couple nights ago our platoon took part in that Preventive Dentistry Happening they wrote us about before I came here to Camp Vernon. Some of the other cadets had gone the night before us and didn't seem to think it was too bad, so we weren't worried too much. Maybe we dragged our feet a little bit, but the corporal got us down there in lots of time.

Outside the clinic they had these beat-up old chairs lined up in rows like a fan and I could see a toothbrush, and a couple of paper cups on them. Two of the boys from the Militia were dishing out what looked like a blob of grey goo on a little circle of cardboard. Before I had time to look real close, this old guy, (I think he was an officer, but he had this droopy white gown on, so I can't say for sure), well, he was standing there up on this sort of porch they have outside the door. He coughed a bit, like Dad does when he's been smoking too much, and then he told us all to gather round him 'cause he was going to tell us all about it.

He was waving around the largest set of store-bought teeth I ever did see and the biggest darn toothbrush you can imagine. He had to "Harruumpphh" a few times to get our attention, and then started in on us. He told us that the Dental Corps was doing something pretty new and holding a "Brush-And-Paint-In" for the cadets that would be at Vernon this summer. He said that at the end of the hour that we were there we'd have up to fifty percent protection against decay for the next year. You know I think Doctor Jones is alright but I can't say I'm too happy about having my teeth filled. So I decided if instead of the four holes I had last year I might get away with maybe only two this year, it might be a pretty good deal. He also said that if we use a toothpaste that had fluoride in it all year at home, we would get even more protection, - up to another ten percent I think.

He told us how this was going to come about. First we were to scrub our own teeth in a special way with this funny looking stuff. This would give us about 12 percent protection but the most important reason for doing it, he said, was to get rid of an invisible coat that we had on our teeth no matter how well we brushed with ordinary toothpaste. Getting rid of it would make it so that when we went into the clinic later to have them put on this fluoride liquid it could get right into the tooth and give us that other 40 or so percent protection.

Then he showed us with the big teeth and brush exactly how he wanted us to scrub. He said that we were to start at the part of the tooth close to the gums and sweep towards the end that we bite with and that he didn't want us, this time, to scrub our gums. I didn't know you were supposed to brush your gums ever!

After he was done gabbing, he had us break off and stand in front of one of

the chairs with all this junk on them. We'd been told that the toothbrushes they had for us wouldn't last very long and weren't the best in the world. He was right. It was pretty long to fit into my mouth and though I think I did a pretty good job with it the way he had us use it, I'll use my own brush regular and just use this one to clean my boots with. Another funny thing was these cups. The one was O.K. It had some water in it that he said was for us to rinse with, but the other one had a rock in it. I couldn't quite figure that one out until he told us that they'd had trouble with the empty cup, which is to spit in. It blew away in the wind (and it sure can get windy here). The rock didn't look too good, but after he explained, it was alright, - and it sure made the cup stay there!

I never brushed my teeth for so long a time in my life and that stuff they gave us to do it with sure tasted like sand. But I guess it works and what taste there was wasn't too bad. And wouldn't you know it, they had us brush "Army style" - by Numbers yet! Ten times in twenty different places. All the time we were brushing this old geezer in the white sack sounding off "one-two-three ...", scrubbing that great big toothbrush of his over the big plates in the same places that we were supposed to be cleaning. And don't think they didn't make sure we did! They had these other three fellows, one in white like the guy on the verandah, one in a green gown and the other one in a grey one. They were going up and down the rows like we were being inspected on parade, making sure we were holding the brush right and scrubbing the place we were supposed to.

They let us spit whenever we wanted, as long as we hit the cup, but we could only rinse out after we finished the uppers and then when we'd done the lowers. "Balloon your cheeks out and swish the water around to get all the powder from around your teeth", the old guy said after we'd got done. Next we had to pick up all the stuff on the chair and dump it in the pails they had all over the place. Then we lined up to go inside.

The clinic isn't any larger than Doctor Jones office, and when we filed in, there were all four of the dental types working at these chairs which they had crowded in. The "whities" were at ones something like you sit in at Doctor Jones', but real ancient. The boys that were being looked after by "Greenie" were perched on a stool like Doctor Jones uses to sit on himself. The poor guys that the younger one in grey was working on just sat in an ordinary chair. But they all seemed to have the same speed - fast, - and you weren't there long enough to get uncomfortable. They had these two rooms and two of them worked side by side in each room. I think this was because they only had one hose between them to dry off the teeth.

Well anyway, they'd get one of us in the chair and stuff some cotton rolls around our bottom teeth and then take up this hose and blow it around. I don't know what they did if they both wanted the hose at the same time. I guess "Whitey" would get it. He seemed to be the boss.

"Greenie" did me and he seemed to gab a lot more than the other fellow. He told me that I had a pretty good mouth but that I ought to get closer to my toothbrush a little oftener. He said that the clear liquid he was going to put on my teeth didn't taste too bad. Like sour lemon, he said. And he was right. Before I could count past fifteen, he yanked out the cotton and put some more in my upper jaw, then painted up there. I'd just decided that the whole deal was going pretty good, when I hear him say: "That's it, Son". I was out of the chair but quick, and the next guy was sitting down. Just as I was leaving, I heard the old geezer, say something that sounded like "Damn", and when I looked around I saw that he'd knocked over the liquid which was in a dish like a small egg-cup. Then he said to "Greenie": "Let's try the tops of those plastic bottles we got from the MIR to hold this stuff. They have a big enough bottom so even I can't tip them over, and they should hold enough for a dozen applications". I don't know what he was talking about, but Greenie seemed to agree with him. I think the old guy's name was Heller and he was running the show, so maybe Greenie was just being nice.

By the time I got out the door of the clinic, (and I was almost the last of our bunch), the chairs were all set up again like they'd been when we got there, and Number 12 Platoon were coming down the road. And it was only forty minutes or so since we'd been paraded over. We'd gone at 1830 hours (that's 6:30 PM back home) and our company, all 123 of us, were back in barracks by 2100. I heard that they did all the boys in camp in five days.

I remembered that the young squirts in A Company are only at camp for two weeks and then another bunch come in and I wondered if these other ones were going to miss out on this chance to have fewer cavities. So I asked our corporal. He knows everything (he thinks). He told me that the old guy (one of the fellows heard someone call him Colonel, but I think he was at least a General), and "Greenie" (Abernasty I think his name was), were going back to Edmonton but that the other "Whitey", who is the Camp Dental Officer (Major Collier, his name is, he's pretty old too), and the young fellow who helps him, (a Corporal East or South or some direction) would be giving the new chaps the treatment as soon as they get there.

Just think, Ma, that's over a thousand of us that those nice dental people have helped. And it didn't take very long and I bet it didn't cost them very much either.

Your Son,

Smiley

Dear Smiley:

Your mother passed this letter on to us.

You are correct but there are real benefits to the Service as well as yourself in this program. If LCOL Heller (Hillier) or WO Abernasty (Abernethy) were to give you the same treatment individually it would take about 45 minutes. We can do six men in the same time and an American study shows how economical it is in terms of time and money. The caries increment in US naval personnel averages over two surfaces per year. Their studies show that they can prevent at least 1 lesion per year. The USN dentist places an average of 200 restorations per month, or approximately 2,000 per year. It can readily be calculated that one auxiliary using the technique described can prevent six times as many cavities as a dentist can correct in one year if the lesions are allowed to develop. Or we can say that in one year one dental therapist can prevent as many lesions as six dentists working full time can correct. Thus, the new program should substantially reduce the backlog of untreated caries. It would also appear to be economical in terms of time and money expended in relation to the health benefits derived.

We have no figures that are comparable but there is little difference between you Smiley and your military cousin south of the border. As you say the program is good for both of us.

1. Practical approaches to large-scale stannous fluoride application. Grossman, F.D. J.Am. Coll. Dentists 58-64 Jan 1968.

The average cost of having one cavity filled would fluoridate water in a community water supply for an individual for about 50 years.

MOUTH PROTECTORS

Captain HJ Nadeau, BA, DDS



The use of mouth protectors by service members engaged in contact sports is one aspect of the RCDC Preventive Dentistry Program that has not been too successful to date. Figures supplied by numerous workers indicate, the value of this protection and the rounded figures pointed out by Heintz² are easy to remember. Dental and mouth injuries before face guards or mouth protectors were used comprised 50% of football injuries. There was about a 10% chance per year of such an injury to a player. He goes on to point out that face guards reduced the number of injuries by almost one half. Mouth protectors have virtually eliminated the remainder.

Stenger's five-year study² of head and neck injuries suffered by college football players showed that mouth protectors may afford protection to other than the teeth. Studies carried out by Hickey³ reinforced this contention. These studies indicate that both intracranial pressure and bone deformation were reduced with mouth protectors.

There can be no doubt that mouth protectors can be most valuable in preventing mechanical injury to the dental structures. Added impetus is given to their use by the studies referred to above, however, a survey of the three Service Colleges indicated that these protectors, though supplied, were being worn by a very small percentage of cadets actually engaged in contact sports.

Among the reasons given for not wearing the protector were difficulty of breathing, talking and swallowing. A gagging sensation, lack of comfort, poor fit and even taste were other excuses listed. The list of complaints was a long one and lack of comfort and poor fit are probably legitimate bases for complaint.

An excellent technique for the fabrication of mouth protectors is detailed in the Preventive Dentistry Handbook, but special care and organization is necessary when protectors are made for large groups as in the case of the Service College Cadets. To cope with the mass production of casts the technicians at CMR used an electric hand mixer mounted on a wooden frame. Of 200 casts only eighteen were rejected because of air bubbles or inadequate tissue coverage.



Care must be taken in trimming the protector. A horseshoe design covering all the teeth should be used. The finish line in the palate is thinned down, almost to a feather edge, as the patients complain bitterly about anything that interferes with the tongue. The labial frenum and the muscles insertion areas must be well relieved and contoured.

Finally, the protector is flamed to eliminate any sharp edge created by the trimming scissors. Extreme care

must be taken in flaming because it will warp very rapidly from excessive heat.

The mouth protector is then ready for insertion which must include final mouth adaptation and correction. The storage and maintenance instructions are simple: it is kept on the stone cast with the football or hockey equipment. It is washed as frequently as desired, using cool or lukewarm water.

How does our profession get young adults to wear a mouth protector for contact sports? Our main weapon remains persuasion and conviction. Not only must we stress the value of this device at every opportunity; health talks, routine orders, etc, but athletic directors too must be convinced of the need for this protection for their players. Some feel that in football the rigid face bar protector is all that is needed. These do protect against the direct head-on blow but offer little side protection. In the first month of the football season one fractured premolar has been extracted at CMR. This would not have occurred had a mouth protector been worn.

Although the Canadian Forces Dental Service provides mouth protectors for Service College Cadets many are still not using this protection against mouth and head injuries. There is an educational job to be done in this area of prevention.

1. Heintz, W.D. Mouth protectors: a progress report. J.A.D.A. 77:632 Sept 68.
 2. Stenger, J.M. et al. Mouthguard: protection against shock to head, neck and teeth. J.A.D.A. 69:273 Sept 1964.
 3. Hickey, J.C. et al. The relation of mouth protectors to cranial pressure and deformation. J.A.D.A. 74:735 Mar 67.
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THE ANNUAL RECALL

MWO RF Matheson



The preventive dental health program being followed at CFB Trenton is of the utmost importance if one is to be concerned with oral health and a pleasing appearance.

Everyone realizes that strong habits have been formed over the years concerning how often we brush our teeth, and, perhaps more important, just how we brush. If a rigid and proper routine had been adhered to in former years, the need for our preventive dentistry program today would be greatly minimized. However, such is not the case, and surprising is the number of persons who neglect something as important and obvious as the health of the mouth and teeth.

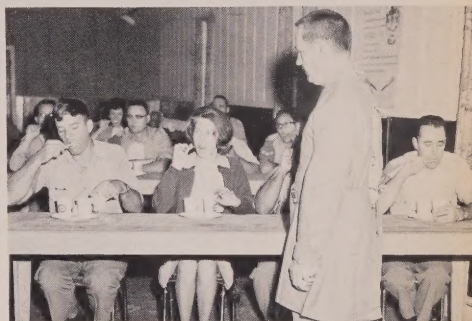
On Base Trenton, the procedure followed is a simple one. Twice a week -- on Tuesdays and Thursdays -- an average of one hundred and forty names are published in Routine Orders. These personnel are instructed to report to a designated area at a given time for the oral hygiene lecture and self-preparation which is a brushing of the teeth with a fluoride paste supervised by the dental therapist.

A annual recall demonstration was held on Thursday, 18 September at the South Side Social Centre, CFB Trenton, when normal arrangements were made to accommodate twenty-four red chart personnel recalled for self-preparation, fluoride application

and examination. On hand to view the proceedings were several distinguished visitors including Brigadier-General BP Kearney, Director General of Dental Services, and his staff of Preventive Dental Officers from across Canada and Europe. These officers were at Trenton attending a two-day workshop on Preventive Dentistry.

The Base Dental Officer, LCOL Anglin, introduced the guests and spoke briefly to the patients. He then invited MWO Kidd to give a résumé of the self-preparation program and to explain its three stages. MWO Kidd also informed the patients at this time of the procedure to be followed at the dental clinic after the "brush-up".

MWO Matheson was called upon to put the patients through the self-preparation. He explained the importance of using the proper kind of toothbrush and demonstrated the correct way of brushing one's teeth. Since his patients had been instructed in advance to bring their own toothbrush, their only requirements at this point were two paper cups, a paper plate, a small container of fluoride paste and a bib. Disposable toothbrushes were available for those who did not have their own. The dental instructors supplied all other requisites. The patients were required to brush each area of the teeth ten times with the pre-mixed fluoride paste, followed by a thorough rinsing upon completion of each dental arch.



Left - Patients being led through the self-preparation stage by MWO RF Matheson assisted by CPL I Linton

Right - MWO VR Kidd ensures patients follow the instructions of MWO Matheson

Having completed the self-preparation stage, the patients and their watchful guests proceeded to the dental clinic where the routine was as follows:

1. Patients reported to the clinic orderly room to obtain their dental documents.
2. One-half of the patients proceeded to the x-ray bay in the west wing, while the other half reported to the x-ray bay in the east wing, where bite wing x-rays were taken.
3. Patients proceed from x-ray to the dental officer's bay for the dental examination. Upon completion of this exam, the patient was given an appointment on the spot if a filling or prophylaxis was necessary.
4. Patients then returned to the orderly room to await topical fluoride application, having left their documents with the dental officer for completion of x-ray reading and signature.
5. Finally each patient was called in turn for a fluoride application.

When these five steps had been completed, the patient was warned not to rinse his mouth for at least one half-hour, after which he was then dismissed with the admonition that he would be recalled one year hence.

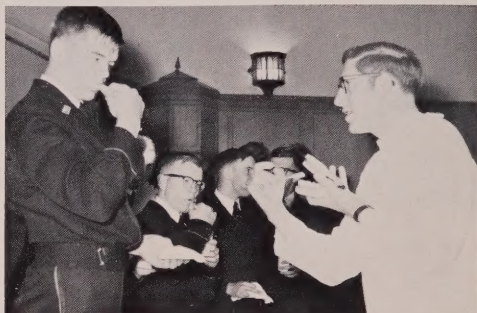
With the dismissal of the patient, the work of the dental personnel is sometimes just beginning. The x-rays previously taken are checked for less obvious problems than those discovered by the dentist during the course of his oral examination, and if treatment is required the patient is given an appointment by telephone.

Thus passed another routine Thursday in the Preventive Dentistry Program which has been carried on at CFB Trenton during the past year.

* Editor's Note

Educators stress the value of personal face-to-face communication since this has been found to be the most effective method of stimulating desired behaviour.

The Corps attempts to approximate the face-to-face situation by having the service members in rows facing an instructor who is constantly moving up and down the row or aisle directing, correcting and complimenting the group on their efforts. The classroom technique demonstrated in the above article was staged for the Preventive Dentistry Workshop, and with a group who were familiar with the method, was most successful. However, the row technique shown below allows closer control and is the better teaching technique.



The object of the "brush-in" is to remove as much of the plaque or membrane as possible so that fluoride can be applied to a cleaned tooth surface. The effectiveness of the brush-in varies in direct proportion to the size of the group and the degree of control exercised. Periodic checks following brush-ins should be made using disclosing solution and the greater effectiveness possible with close control becomes apparent.

Editor's Audit

At last glance the number of articles and news items available for publication in the Quarterly was approaching nil. We need everything from four page articles complete with charts, tables, drawings, photographs and references to short little descriptions of helpful hints or improved techniques. How about an illustrated description of your new interest in yoga or a story with pictures of that recent trip up the Amazon? Does a point raised in a recent issue or elsewhere need clarification or elaboration? Raise your pen before your voice. We're approachable and can read your letters better than your minds. Happiness is a full in-basket.

The RCDC News

Specialist Training



LCOL WR Thompson recently completed the 3rd year of the residency program in oral surgery at the Faculty of Dentistry, University of Toronto and at the Toronto General Hospital. In July the Royal College of Dental Surgeons of Ontario certified LCOL Thompson as the first specialist in oral surgery in the Canadian Forces.

He received his previous oral surgery training at the US National Naval Medical Center, Bethesda, the Walter Reed Institute of Dental Research in Washington and Doctors Hospital in Toronto.

LCOL Thompson entered the service after graduation from the University of Toronto in 1949. He served in various locations including Korea, Europe, the RCDC School, National Defence Medical Centre and on the staff of Division of Dental Services and is now located at CFB Trenton.

MAJ JJN Wright recently completed requirements for certification as a specialist in periodontics at the University of Toronto and also obtained a Master of Science in Dentistry degree in oral pathology.

After receiving his DDS from University of Alberta in 1956 he received graduate training at the Royal College of Surgeons in London, England and was the first RCDC officer to attend the Advanced Theory and Science of Dental Practice Course at Walter Reed Army Medical Centre given under the auspices of Georgetown University. On this one-year course he received the Highest Achievement Award for obtaining the highest academic standing on the course. MAJ Wright is now in London, Ontario.



MAJ LA Reynolds recently completed his requirements for certification as a specialist in periodontics.

In 1967-68 he also attended the Advanced Theory and Science of Dental Practice course followed by dental resident training in periodontics at Walter Reed General Hospital.

He received his DDS degree from Dalhousie University in 1957 has received graduate training at Royal College of Surgeons in London England. He is now stationed at the CFDS.

MAJ IW Susser completed graduate training at the School of Hygiene, University of Toronto and received his Diploma in Dental Public Health.

He joins a group of dental officers trained in this specialty consisting of LCOLs DH Hillier, DH Protheroe, WH Harrington, MAJs JW Jolly, JJP Chatwin, and Dr PH Guevremont.

After receiving his DDS at McGill in 1952 he received graduate training at the US Naval Dental School in Bethesda and Royal College of Surgeons in London, England. He is now stationed in Winnipeg.



Czechoslovakian Dentists

A team of RCDC personnel headed by Major AG Taylor is conducting a program at University of Western Ontario to retrain 16 Czechoslovakian dentists to Canadian standards and methods. The program commenced 15 Sep 69 and will terminate 30 Jun 70.

The program was proposed by the Royal College of Dental Surgeons of Ontario and the training costs are being paid by the Province of Ontario.

Major JJN Wright, Captain W Budzinski, Sergeant JA Atherton, Corporals TJM Cooper and GG Albertson and Miss KS Heenan are also members of the team with part-time temporary duty assistance from LCOLs WR Thompson, PS Sills, MAJs JVP Chatwin, LA Reynolds, DA Charles, CAPT HA Pankratz, MWO JH Sadler, CPL LPJ Nadeau and perhaps others as the program progresses.

COL LG Craigie, Commandant of the CFDSS, is co-ordinator of the program.

Dental Officer Training Plan Summer Training 1969

A colourful ceremonial parade and inspection by the Director General Dental Services, BGEN BP Kearney, marked the completion of the twenty-first year of subsidized undergraduate summer training at the CFDS School.

It may be of interest to note that a one-year subsidization plan was introduced in 1948 for the final year at university.

The training in 1969 consisted of clinical work at the CFDS School, where candidates worked in syndicates of four students for two days at a time rotating from clinical managers to all the disciplines found in a military dental service and lectures and demonstrations on dental and military subjects. Periods of several days at a time were spent at the Meaford and Borden ranges where dentistry under field conditions was practiced under canvas and in the mobile vans.

These exercises also provided experience in general military field activities.

The program had the following objectives as stated in the field training program administrative orders:

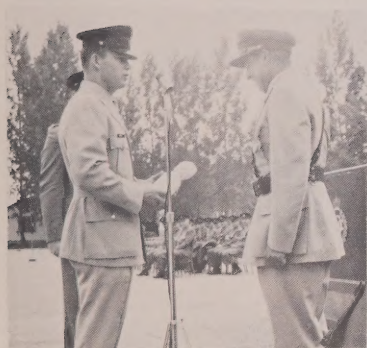
- a. To demonstrate the operation and maintenance of field equipment.
- b. To train candidates in the establishment, operation and maintenance of a Field Dental Unit.
- c. To provide a practical exercise to train candidates in the establishment of a Field Dental Unit Headquarters.
- d. To provide Phase I preventive dentistry treatment in the field.

This program has been devised to fulfill these objectives and to determine the scope of future field training for DOTP candidates.

Comments from the candidates were enthusiastic and a great time was had with plenty of fun to fill the off-duty hours and evenings.

Excursion trips were arranged for the DOTP candidates of both phases to visit the facilities of the Dental Faculty at the University of Toronto and the Astra Drug Company in the Toronto area.

Phase 3 candidates went by air to Washington, DC, and 2LT JD Rowatt gives this account of their visit with the dental services in the District of Columbia:



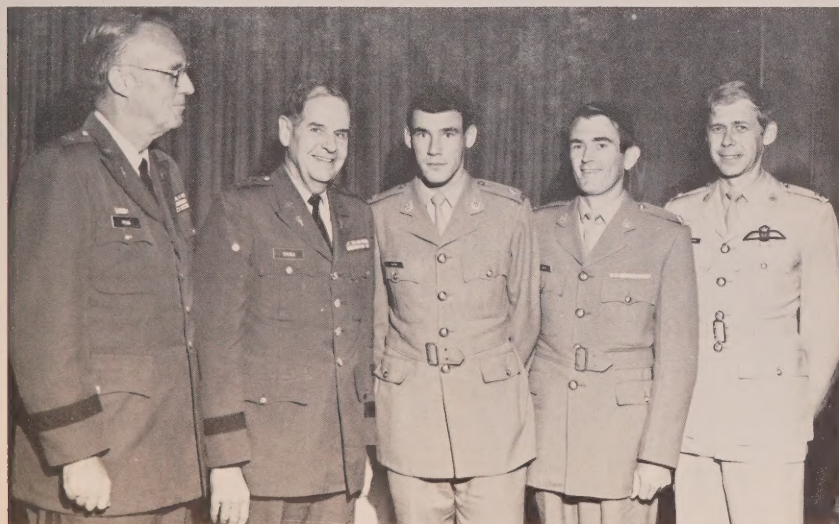
Top Left - 2LT RA Hunt, University of Manitoba, receives Second Phase Honour Cadet Trophy.

Top Centre - 2LT BP Schow, University of Alberta, receives Chief Instructors Trophy.

Top Right - 2LT FR Margetts, University of Alberta, receives Third Phase Honour Cadet Trophy.

Bottom Left - Paint Remover??

2LT TA Bradley, University of Alberta was Third Phase runner-up and 2LT CG Milne, University of Alberta was runner-up for the Chief Instructor's Trophy.



L to R - BGEN James Pegg, MGEN Robert Shira, 2LT Floyd Jackson, 2LT Eric Dalzell, MAJ NH Andrews.

"On Saturday morning, 12 Jul 69, thirty-four Phase 3 DOTP candidates left CFB Downsview for a familiarization tour of US Army and Navy Dental Corps facilities in Washington, DC. On arrival at Andrews AFB we were met by MAJ N Andrews, who explained the do's and don'ts of Washington.

We were welcomed on Monday, 14 Jul 69 at the US Army Institute of Dental Research by BGEN James S Pegg, Director of Dental Activities, Walter Reed Army Medical Centre. Then came an address by MGEN Robert B Shira, Assistant Surgeon General and Chief of the Army Dental Corps, followed by a tour of research, laboratory and clinical facilities of the US Army Dental Corps at WRAMC.

The following day we visited the Naval Dental School, National Naval Medical Centre at Bethesda, Md. where CAPT WC Wohlfarth, Jr, DC, USN greeted us.

A tour of dental facilities occupied most of the morning, and was followed in the afternoon by a series of lectures and discussions on a variety of topics ranging in scope from intraoral photography to new concepts in bone grafts.

Wednesday afternoon the tours continued at the National Institute of Health in Bethesda. Here the emphasis was placed on the research aims and facilities of the NIH in combating oral disease.

One of the highlights of the stay in Washington was a series of lectures and case presentations in the US Army Institute of Dental Research Room at WRAMC. COL LH Guernsey showed us a variety of the oral surgery services provided at WRAMC. LCOL JP McCaslaud discussed removable prosthodontics with emphasis on maxillo-facial prostheses. LCOL PD Crowe continued the lecture series with a talk on fixed prosthodontics emphasizing diagnosis and treatment planning.

After lunch, LCOL JS Siebert showed case presentations demonstrating the use of bone marrow in the treatment of refractory lesions of the periodontium. COL SN Bhaskar ended this day with a series of seven short films illustrating a variety of techniques and new materials applicable to a general practitioner.

The last day was spent inspecting the facilities of the Armed Forces Institute of Pathology and observing its relationship with WRAMC in providing information to the rest of the medical complex.

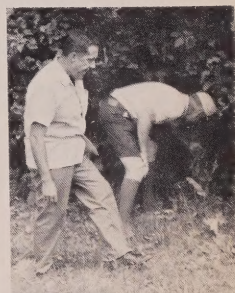
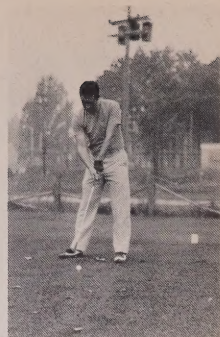
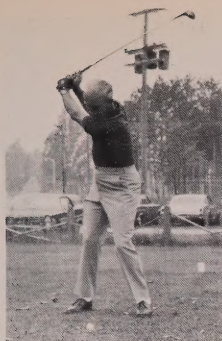
To say that the trip was educational would be an understatement. We were provided an insight into the tremendous scope of dental services and research which would possibly be unattainable elsewhere. All of us were thankful of having had the opportunity to spend such an enlightening week, and most of us are determined to get back to either the US Army or Navy installations some day for a more extended visit."

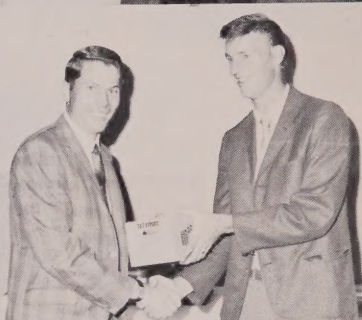
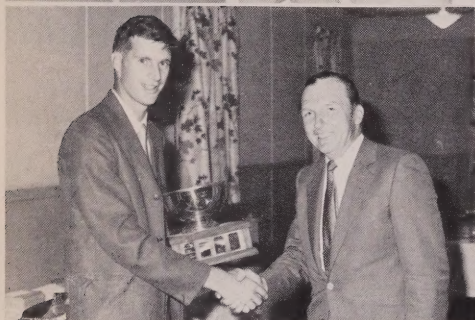
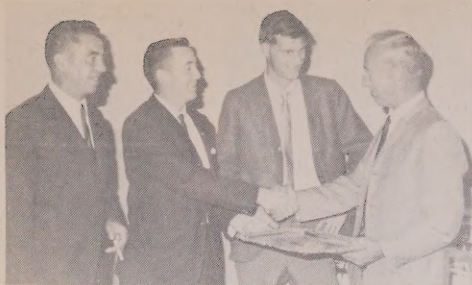
Seventh Annual RCDC Golf Tournament

Once again Dental Duffers and Sandbaggers from Dental Units all across Canada returned to the hallowed ground of Base Borden to pay homage to the art of golf and sociality. 120 golfers participated in the annual RCDC Golf Tournament, including the Director General of Dental Services, BGEN BP Kearney and BGEN KM Baird (ret'd).

The weather was great, the golfing outstanding and the get-togethers at Building T-70 were something to behold.

Although the central theme was golf, the main purpose of the gathering was for Corps members to get together and have a good time and generate an esprit de corps. The diverse and possibly unsuspected talents in the CFDS came to the fore when BGEN BP Kearney and CPL Danny Danyluck pooled voice and guitar to some popular 'blue grass of home' tunes, and were joined by numerous others.





On Saturday night the banquet was held and after the delicious meal trophies and prizes were awarded.

The RCDC(R) Officers Trophy awarded to the three-man team with the lowest gross aggregate score over 36 holes went to the CFDSS team comprised of COL LG Craigie, CAPT Dave Devine and CPL John Clint. (Top left)

The KM Baird Trophy awarded to the player with the low gross score over 36 holes was won by CAPT Bill Kearns from CFB Petawawa with a score of 73 - 80 for a total of 153. (Top right)

The GR Covey Trophy awarded to the player with the low gross score over 18 holes went to CAPT Dave Devine. (Lower left)

CAPT Dale Graham received the tournament low net. (Lower right) Other gross and net prizes were awarded along with a few novelty prizes.

For the non-golfers there was a putting contest using the strangest putter yet, with a round head, compliments of Club Pro Norm Doyle. WO Pete Peterson walked away with this prize, not without having received fair competition from PTE Micheline Dumont.

CFDSS

by MWO HE Franzgrote

Visits

COL Stanley Johnson, Commander Trinidad and Tobago Defence Force, visited the CFDSS and took a lively interest in all phases of training and treatment.

Mr G Haugh from the Weber Dental Company visited the School 18 Sep 69 and lectured to the DENT PL 4 course candidates and staff personnel on the latest Weber dental equipment.

Mr C Hunt, Ash-Temple Toronto, and Mr John Alpert, mechanical engineer and Vice-President of Air Technic Incorporated, New York visited the School 29 Sep 69 and delivered lectures and demonstrations on compressed air requirements in the dental office and air line dryers in dentistry to the DENT course, staff personnel and No 1 DED staff on temporary duty.

Major SW (Syd) Muller Retires

Major SW (Syd) Muller, 48, is retiring from the Forces this month. During World War II he saw service in Canada, UK, India and Burma. Major Muller was born in Regina, Saskatchewan and received his early education there. After High School he entered Regina College of the University of Saskatchewan. After the war he entered University of Toronto and received his Doctor of Dental Surgery Degree in 1950. He re-enlisted in the Canadian Forces in 1949 and was promoted to Captain in 1950. He has had several postings in Western Canada and was with 1 CIBG in Europe from 1953-55.

In June 1957 he received a Diploma in Dental Public Health from the University of Toronto, and since that time has been on staff of the CFDSS as an instructor and also as Base Preventive Dentistry Officer.

Dr Muller has been appointed first Dental Director for the Simcoe District County Health Unit. He, his wife Win, and two children, Kim 17 and Laura 12 will reside in Barrie.

Public Relations for Canadian Armed Forces

PTE(A)(W) Ilse Kuepper took part in this year's Armed Forces display at the Canadian National Exhibition in Toronto as a hostess.

"Tuffy Tieman" Golf Tournament

The CFDSS again won the "Tuffy Tieman" trophy in the medical-dental golf tournament held 11 Sep 69 on the Circle Pine Golf Course. Participants were COL LG Craigie, CAPT Max Fisk, CAPT Dave Devine and CPL John Clint, who won one of the main prizes. The medics in stern self-criticism in the Borden Citizen suggest that their people go back to school and take some lessons. They did not specify which school or who should give the lessons but the CFDSS golfers have a syllabus prepared.

1 Dent Eqpt Dep

by SGT MD Longford

Change of Command

Major DG Cartwright has replaced Major PL Griffiths as commanding officer. Major Griffiths has retired and is now living in Ottawa.

Promotions

CPL JAL Boulianne, on being promoted to sergeant also accepted another new responsibility. Monique weighed in at 5 lb 5 oz and is the only girl with a Montreal EXPO uniform in her wardrobe.

Division News

BGEN BP Kearney attended the Military Congress of the Federation Dentaire Internationale at New York 11-15 Oct 69.

SGT Paul Dumas won the CFHQ Golf Association "C" Class championship.

The fall will see a number of staff changes. Jim Taylor after a brief stay moves on to DMRE but hopes to qualify for future RCDC golf and curling tournaments.

1 Dent Unit

by WO JAJ Fret

Training

WO Strachan, Med A, attended a one-day briefing on denture repairs and dental emergencies on 7 Aug 69 prior to a posting to CFS Alert.

Honours and Awards

WO CBM Torrens was presented her CD on 25 Jul 69.

Retirements

A ceremony was held at CFB Rockcliffe 2 Jul 69 to honour MAJ Skinner, LT Johnson, SGTs Leonard and Richardson who are retiring after long and faithful service.

11 Dent Unit

by MWO RD McHugh

Conference and Visits

COL GC Evans attended a meeting held in Winnipeg 16-17 Sep 69 on the reorganization of the Canadian Forces Command Structure.

LCOL DH Hillier presided as Chairman at the Preventive Dentistry Workshop held Sep 17-18 at CFB Trenton.

Summer Training

CAPT AF Brothers, CAPT RCA Fearon and CPL Mackie from our Calgary Detachment supplied dental support during the first part of summer training at Camp Wainwright. CAPT JAR Cowan of 14 Dental Unit arrived on 26 Jul and, assisted by CPL Morphet, took over the clinical duties until the completion of the exercise.

MAJ WR Collier and CPL RC North of the Edmonton Detachment spent the summer at Camp Vernon looking after the needs of the cadets. LCOL DH Hillier and MWO EK Abernethy joined the staff there to assist MAJ Collier with the Preventive Dentistry Program for the period 8-15 Jul.

Personnel

MAJ RJ Paturel enjoyed part of Jul and Aug on leave in Denmark and is on his way back there again. It is reported that the purpose of this latter trip is to bring back a Danish bride.

Two former members of the Corps, Mr Vince (Blackie) Blackmore and Mr John Shiner, having passed the examinations set by the College of Dental Surgeons of British Columbia, were duly registered on the 14th of Jun 69 as dental hygienists in that province, where they are now gainfully employed.

MAJ LE Kelly (retired) paid a visit to his old stamping grounds, CFB Chilliwack, on the 15 Aug. Larry is now employed by Northern Health Services at The Pas, Manitoba.

Mr Ken Wallace, who served for many years in the Corps as a dental technician, is enrolled in 1st-year Dentistry at the University of Alberta.

Vital Statistics

Congratulations to SGT Florence Putman, on her recent marriage. Flo used to be known as CPL Schmaltz. However, all that has changed. She was married on the 19th of Jul and promoted SGT 1 Aug 69.

Remember PTE Helen Latimer? Well, Helen is now Mrs Martin, having married an airman on 6 Aug 69. Both these girls are employed at CFB Comox.

Sports

CAPT KHE Rosengart, Holberg Detachment, continues to report rain and more rain. In spite of the monsoon season, however, the salmon fishing is excellent, crabs are caught in abundance as well as prawns.

CPL Tallack's low net of 42 for nine holes was good enough to win the Medical-Dental annual golf tournament held at the Namao golf course on 11 Sep 69. Roy also made the longest drive, which measured 230 yds.

CWO Bob Daw won 1st prize in the Senior NCOs fishing derby held at CFB Cold Lake. His catch of a 9-lb 12-oz pike was tops in that event. MWO Earl McFadden took top honours in the pickerel competition with his catch of 5 lbs 7 ozs.

A fishing derby was held by personnel of the Esquimalt clinic on 15 Aug 69. The weather was not at its best, but CAPT Watson caught a small sea bass in his first attempt at deep sea fishing, and SGT Earl Borden boated a 3-lb salmon.

Grunion Run by CPL DM Eden

"On the 17th of September approximately one-third of the base personnel held a meeting and mass execution at Point Holmes. The sky was cloudy and the sea was throwing waves of a foot to a foot and a half at the gathering crowd huddled around the two bonfires on the beach. The gala occasion was the yearly run of grunion onto the beaches. The object of the evening was not that of catching the grunion but catching the dogfish that follow them on their spawning run. On my arrival at Point Holmes I witnessed about three hundred wet and frozen potentials for Thursday's sick parade. They were armed with baseball bats, golf clubs, ten-foot gaffs, - anything that would render a "Death Blow" to our "Pacific Shark". The Corps was represented by the clinic's three courageous but sick dental assistants. PTE Martin and husband arrived at eight o'clock but retreated to their car and home an hour later. SGT Putman and husband were the only ones that got as far as the water. The only excuse I can give for my cowardly departure after the first half-hour, is that my hip flask isn't quite as large as SGT Putman's. It was an enjoyable evening, even though we did not bring in any prizes."

12 Dent Unit

by SGT GR Jennings

Militia Training

Many militia soldiers were in training at Base Galetown this past summer. One suspects that a considerable number of these troops are not really of enlistment age. Two factors support this suspicion:

- (1) one sees the occasional sick parade patient with a mixed dentition.
- (2) the Base Exchange keeps running out of ice cream cones.

German Destroyer Visits Halifax

The West German destroyer Hambourg was in the Port of Halifax during July. CAPT KPH Buchholz escorted the dental officer on a tour of HMCS Bonaventure and the dental clinics at HMC Dockyard and CFB Stadacona.

Honours and Awards

SGT Frank Martell shown receiving his 1st Clasp to the Canadian Forces Decoration, the award is being presented by COL MacKenzie, CFB Greenwood.



Canada Games

MAJ JR Robertson was selected as a member of the Prince Edward Island Water Ski Team that participated in the Summer Games in Halifax-Dartmouth during August.

Tennis

Two officers of this unit participated in the Zone 8 Tennis Finals — CAPT OG LePage was on a team that was "runners-up" in the doubles. CAPT ED Cragg lost out in the finals of the singles event. Maybe DPCAS/DOM could find a way to have these officers serve in the same clinic — then we might come up with a winner.

13 Dent Unit

by SGT ES Beattie

The chaotic holiday season is past. Personnel are once more getting settled down to serious employment after visits to such diverse places as the Bahamas, New Mexico and Vancouver. New postings are possibly looking more acceptable with time and some changes. and the work goes on.

The Preventive Dentistry Workshop held at CFB Trenton gave this unit a good start into a new season of work. A small incident occurred during this gathering which may guide anyone posting signs for future such meetings. Several officers and Sr NCOs (Air) were noticed examining the sign over the door where the meeting was held. When asked their reason they replied that they were waiting to see the dancing girls and the writer was referred to the Concise Oxford Dictionary. Upon investigation, it was learned that the definition for symposium is: - an ancient Greek after-dinner drinking-party with music, dancers or conversation - any drinking party—.

Was it Shakespeare who said that . . . a rose by any other name . . . ?

Sports

CAPT CW Kearns from the dental clinic at CFB Petawawa helped Zone 4 win the Team Championship at the First Annual Canadian Armed Forces Golf Tournament held in Ottawa during 23 to 25 July.

CPL MGE Williams of the CFB London dental clinic was an energetic contributor in assisting CFB London to a close second in the Zone 5 Track and Field meet at CFB Borden. He won the High Aggregate Trophy for Track by placing first in the mile and in the 4 x 440 relay and second in the 880 yards and in the 440 yards.

14 Dent Unit

Training

WO RB Johnson has started his studies at the University of Manitoba on leave without pay.

Special Events

On 29 Oct LCOL Butcher officiated at the "swearing in" of four DOTP cadets;- Mr WJ Dawson, Mr CB Bullock, Mr KW Howie and Mr GD Duff. He had been requested to act in the same capacity when Mr RS Sorochon and Mr BD Kendall enrolled in September. The enrollees noted the tri-service participation at the ceremony.



L to R

Mr RS Sorochon

CAPT(A) Bury, recruiting officer.

MAJ(S) Anderson, Commanding Officer CFRC

LCOL(L) Butcher

Sports

His Worship the Mayor of CFS Gypsumville (CAPT Wilford) organized a fishing weekend at Gypsumville. Several personnel of the unit motored up north and caught a lot of fish.

MAJ Headley represented the Base Commander of Shilo at the "Prairie Open Golf Tournament" at Gimli, Man. on 15 Aug 69.

15 Dent Unit

by MWO AF Davison

"Quebec Knows How" This statement may be taken with a grain of salt, a little bit of skepticism or however you might wish to interpret it. Nevertheless, 15 Dental Unit has proceeded with a program designed to keep nearly everyone happy from the dental point of view.

The unit has several out-of-the-way clinics - Moisie, Chibougamau, Goose Bay - which have had dental teams in to clean up the dental problems before the freeze-up begins.

Plans have been completed for another successful Preventive Dentistry Program at CMR St Jean. Dr HP Guevremont, CAPT JEG Joubert, WO RJ Rutledge, CPL HEM George and CPL PJ Mehler will join the staff at CMR and CFB St Jean to make this project a success.

COL CM Cornish and LT JP Carrier did a quick survey of the dental facilities at CFS Moisie. LT Carrier is not revealing his plans for a fishing trip next spring when the trout are in season.

Sports

It would seem by reports from clinics that it is all work and no play as no one in the outlying places has captured any trophies or prizes. After a hard fight with numerous coloured leaves, 11 golf clubs, a couple of small white balls and the 19th hole, MWO AF Davison won third low gross at CFB Montreal wind-up golf tournament.

4 Fd Dent Coy

by SGT P Fox

Arrivals in Europe

MAJs DG Jones, EF Foley, CAPTs WA Gray, DC Morgan, WO J Hossdorf, SGTs RA Garnhum, MJ Hall, WB Looker, CPLs MJ Craig, JJ Vasek and PTE A Steeves have recently arrived.

Conferences and Courses

LCOL GE Windsor, MAJ H Griesback and CAPT GR Nye attended a United States Dental Training Conference held at Garmisch, Germany 22-26 Sep 69.

MAJ HS Wood attended a Preventive Dentistry Workshop at Trenton 17-18 Sep 69.

SGT RS Black attended an orthodontic appliance construction course at British Military Hospital Iserlohn 25-28 Aug 69.

Leave

Europe being the leave centre for 4 Field Dental Coy personnel, the following countries were visited - CAPT Grise and CAPT Petrie toured the Scandinavian Countries, WO Dion toured Austria, SGT Kukurudziak went to Holland, SGT Tweed went back to Ireland, CPLs Sadlier, Labrosse and Michaels visited Italy. CAPT Shirkey and CPL Villeneuve went to Spain.

Square Dancing

SGT & Mrs P Fox, along with members of the Soest Belles and Beaux Square Dance Club, put on square dance demonstrations at the Dortmund World Flower Show, the Shutzenfest at Deilinghofen and for the members of the British Army SGTs Mess at Herford.

Shooting

SGT F Schuh won the German Great Gold Pistol Medal at a shoot held in Werl placing first in a field of 150 competitors.

Dent Det Cyprus

CAPT B Hart arrived in August, SGT N Hope and CPL K McDonald arrived in September and will be looking after the dental needs of 2 RHC.

On October 9 the clinic staff visited SBA Dhekelia, a British base with a large hospital. COL French, Senior British Dental Officer for the island of Cyprus, gave a tour of the rather spacious facilities there.

Dental Treatment

Temporary duty is much sought after in 35 FDU.

CAPT Fortier and CPL Boles proceeded to CDLS London 4 to 22 Aug to provide dental treatment for personnel in that area.

MAJ Cyrenne and WO Adams journey to TSD Prestwick Scotland 22 to 29 Aug to update the dental treatment for personnel stationed there.

MAJ Legendre took a team comprised of CAPT Lanctis, WO Lowery, CPL Girdlestone and PTE Marcoux to AWU Decimomannu, Sardinia for period 4 to 19 Sep. This team performed recall treatment for service personnel and also treated service dependants.

RCDC personnel in Canada must dream of locations such as these when TD time comes around.

Retirement

A luncheon was held at the Black Forest Officers' Mess on 6 Aug to say farewell to MAJ Cliff Mason prior to his departure to Canada. Dental officers from Lahr and Baden Soellingen attended as well as the SMO and Regional Flight Surgeon Lahr.

Flying Type

LCOL Protheroe recently was the first member of the unit to fly in a CF 104. He reports it is the only way to travel and quite a thrill to watch the air speed indicator move past 1000 knots as you go through the sound barrier. The latter is not particularly exciting since you only feel a minor change in pressure in the ears. Things that strike him when flying in this aircraft are the quietness in the cockpit, the power on take-off, the safety equipment for ejection, the minor effect of turbulence because of the small wings, and the distance travelled in a short time. The greatest thrill, however, was to wave to his wife standing on the balcony at home while travelling 500 MPH, then climb straight up in a slow roll and level off at 20,000 feet, all in a matter of a few seconds.

Promotion

CPL Gratton, our unit equipment repairman, has the honour of being the first master corporal of the unit.

Sports

The first annual Air Division Medical-Dental golf tournament was held at 4 Wing on 11 Jul with approximately 30 golfers and non-golfers in attendance. A very enjoyable time was had by all despite the rain. MAJ Cliff Mason, was the low gross winner.

CAPT Reace Jackson was among the winners on his first golf outing at the 1 Wing-ADHQ July tournament at Strasbourg France.

CPL Tom Girdlestone was the "B" Division champ at the Air Division Quarterly Skeet Shoot with a score of 92 out of a possible 100.

35 FDU History

An updated article on 35 FDU has been requested by the Editor of the Quarterly. It would be greatly appreciated if personnel who have had tours with the unit would assist in this task by sending photos they consider suitable for publication to the unit associate editor.

Professional Training

Walter Reed Army Medical Center - Washington, DC, USA

CAPT JHJ Nadeau - Preventive Dentistry Course - 6-10 Oct 69

Training

Canadian Forces School of Management - Montreal, Que.

CAPT RG Peebles - Middle Management Course 6905 - 14 Oct-1 Nov 69

Canadian Forces Dental Services School, CFB Borden, Ont.

Dental Assistant Pay Level 3 Course - 8 Oct-9 Dec 69

CPLs GG Carscadden, JP Oakley, D Frerichs, GE Sykes; PTEs (A)(W) SE Greene, NL Rivers, IL Kuepper, (S)(W) MR Williams, LE Supple, VJ Arsenault, KL Davis, RAG Gayler, RA Powell, D Purich.

Dental Clinical Assistant Pay Level 6 Course - 1-31 Oct 69

CPLs (A)(W) JM Patterson, SJ Kirley, I Linton, BA Gilkes, JAN Audet, A Busse, HB Clifton, RW Daryluck, DW Mason, H McRae, RG O'Dell, IG Proud, RL Solomon, JH Thorburn, PAG Timmers, GW Porteous.

Junior NCO Course - Cdn Forces School of Communication and

Land Ordnance Engineering - CFB Kingston, Ont.

PTE JG Allain - 23 Jun-14 Aug 69

PTE JD Hopkins - 20 Aug-8 Oct 69

Training with Industry

Crown and Bridge Pyroplast Construction Course - Williams Gold Refining Co, Buffalo, NY - 6-17 Oct 69

WO JC Bleakney

Installation Maintenance and Repair of Ritter Co Equipment, Ritter Equipment Co, Rochester, NY - 20-24 Oct 69

ASGT BA Green

Welcome to the Corps

A cordial welcome is extended to SGT JG Cote; CPLs JP Oakley, RE Pockett; PTEs PF King, RA Powell; Mrs J Deschamps, Mrs FL Mitts, Mrs DE Beemer, Mrs L Keyes and Mrs G Gray who have recently joined the Corps.

Promotions

To MAJ - DJ McCallum, DNH Charles, DG Cartwright, EF Foley, HS Wood, GS Zwicker, H Griesbach, CJM Boston, GR Nye
To CAPT - RW Bowness, JR Savoie
To MWO - TW Sullivan
To WO - R Johnson, G Schechosky, WJ Parker, RJ Rutledge, JA Christensen, JF Kennedy
To SGT - JP Lambert, MD Longford, IA Braslins, CSTC Sabine-Pasley, A Jack, EJ Putman (Nee Schmalitz), HKK Gapmann, RS Black, JRY Gratton, PE Harkin, DW Roy, NH Hope.
To CPL - CH Forsythe, JA Muir, GW Bowman, G Allain, TA James

Retirements and Releases

LCOL JM Smith; MAJs SW Muller, DH Skinner, JI Gordon, HG Bunston, DDR Girard, JC Roy, CM Mason, PL Griffiths; LT C Johnston; MWOs JF Marchand, JS Wentzell; SGTs J Leonard, WS Richardson, WR Dowell; CPLs WA Hurding, JE Kayne, DA MacAulay, JRA Cloutier, (A)(W) BM McCaffery, HH Nogler; PTEs (A)(W) BR Caddey, JM Boissoneault, (S)(W) RJ Connolly (Nee Thomas); Miss Y Bailey, Miss F Beaulieu, Mrs R Hill, Mrs C Yeomans, Mr S Bingham

Vital Statistics

Marriages

CAPT EG Schroeter to Miss Donna Holding; CPL (now SGT) (W) FB Schmaltz to SGT (A) CW Putman; CPL (W) SJ Nowlan to HDJ Gagnon; CPL NC Jones to Miss Maxine Roseberry; PTE (S)(W) HVP Latimer to CPL (A) SA Martin; CPL RG Brighty to Miss Marie Vessey in Miscouche PEI NOT to Miss Hugette Miscouche as reported in the last issue of the Quarterly -- Sorry Marie.

Births

Daughter - CAPT & Mrs RCA Fearon (Adopted), CAPT & Mrs RI Stammers, CAPT & Mrs P Kozak, CAPT & Mrs PFG Stirling, CAPT & Mrs AF Brothers, SGT & Mrs CVS Forsythe, CPL & Mrs RW Mullin, CPL & Mrs JG Hughes, CPL & Mrs JAL Boulianne, CPL & Mrs RK Delmage.

Son - MAJ & Mrs GW Hill, CAPT & Mrs RG Kerr, CAPT & Mrs AD Stewart, SGT & Mrs W Olynyk, SGT & Mrs JP Lambert, CPL & Mrs TA James, CPL & Mrs BL Mackie

Twins - PTE & Mrs WWH Catling

Condolence

Sincere sympathy is extended to MAJ CL Gullekson, CAPT GC Post, SGT Frank McKay and Mrs Vera Williams whose fathers recently passed away.

In Memoriam



CFHQ announced the death of Major Joseph Pierre Allyre Legendre as a result of a car accident in Germany 22 October 1969.

Pierre was a graduate of the University of Montreal and joined the RCDC upon graduation in 1962. He served in Calgary, Petawawa and Germany.

All members of the Corps extend sincere sympathy to his wife Bibiane and son Joseph.

L. AL L.
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The RCDC Quarterly

Published by authority of Brigadier-General BP Kearney, MBE, CD, QHDS, DDS, FICD

This publication serves as a means for the exchange of ideas, experiences and information within the Royal Canadian Dental Corps. Views and opinions expressed are those of the authors and are not necessarily those of the Director General of Dental Services or the Department of National Defence.

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Cover Photograph

The Canadian Forces Dental Services Badge

THE NEW BADGE

COL. G.R. COVEY, MBE, CD, QHDS, DDS, FICD.



In the second issue of the first volume of the Royal Canadian Dental Corps Quarterly, published in July 1960, the then Lt Col CM Cornish, CD, DDS, wrote an article on "The Corps Badges". In this article he traced their history of design from the first Canadian Army Dental Corps badges worn by our personnel in the Canadian Expeditionary Force during the First World War through to the present RCDC badge. It was apparent that new badges were created each time there was a change in organization, function or designation of the military dental component.

In a recent CFHQ policy statement to organize officers and men with common and associated tasks into groupings within the Canadian Forces, the dental "service grouping" was designated as the "Canadian Forces Dental Services" and this title later appeared in Annex A to CFAO 2-10. In keeping with this policy, DGDS was requested to provide a design for a new dental badge. Subsequent submissions of proposed designs from all dental ranks yielded a great variety of ideas from which the new badge was evolved. A coloured hand-painted replica of this badge was approved by the Chief of Defence Staff and forwarded through the Governor General to Her Majesty the Queen with the following official description: "Within a wreath of stylized maple leaves Or, a cartouche vert edged Or, charged with the Rod of Aesculapius and a Crusador sword in saltire argent, in front of which is the Greek symbol Delta argent, the whole ensigned with the Royal Crown Proper". Approval of the badge as shown on the cover was received from Her Majesty on 14 August 1969.



CAP BADGE

What is the significance of the badge? The wreath of stylized gold maple leaves indicates that it is Canadian and although it has ten leaves, they do not represent the ten provinces by intention but are stylized because the leaf on the Canadian Flag is stylized. The gold cartouche, which according to the Oxford Dictionary is archaeologically speaking, an "oval ring containing hieroglyphic names and titles of Egyptian Kings etc", has no real significance in our badge other than to contain the "device". To explain the device, it contains three parts. First, the "Rod of Aesculapius" — a rod or staff with a single serpent entwined around, which appears in ancient representations of Aesculapius, the God of Healing. Since it is the only true symbol of the healing arts, it appropriately identifies dentistry as one of the healing sciences. Secondly, the "Crusader sword" depicts the military environment of our dental service. Thirdly, the "Delta" is the fourth letter of the Greek alphabet which in this emblem denotes dentistry. Finally, the "Royal Crown Proper" ensigns the whole and indicates allegiance

to the Queen. Inherent also in the significance of the badge design is the fact that it maintains the general outline of the RCDC badge and thereby provides some measure of continuity. Further, the device is an adaptation of the recently approved Canadian Dental Association symbol for dentistry and finally, since the dental service for all elements of the Armed Forces will continue to be provided from a single dental source, it is truly distinctive.

Without getting into too much detail in this article either concerning pattern description or method of wear of cap and collar badges for both officers and men, it may be of interest that the officers' cap badge has gold-plated cartouche, leaves and crown, the device being silver-plated, and the badge fully pierced so that the cap material shows between the device and the oval. It is worn by all officers Colonel and below, including officer cadets. The men's cap badge is made of non-polishable brass and white metal with solid brass centre (stippled rather than pierced).



RIGHT

COLLAR BADGE



LEFT

The collar badges consist of the device only and are worn in pairs - serpents facing inward. Both officers' and men's patterns are pierced, the former silver-plated, the latter white metal.

The latest information on the issue of the new badges is that they have gone to tender, the contract is let and it is expected that they will be available during the summer of 1970.

May we all wear our new badges with the same pride and distinction that we felt for our former Corps badges!

----- LETTERS -----

Director General of Dental Services,
Canadian Forces Headquarters.

Dear General Kearney:

As you know, on November 11th the Board of Directors of the Royal College of Dental Surgeons of Ontario visited the University of Western Ontario to meet with your staff conducting the special course for the Czechoslovakian dentists.

As a member of the Board, I am most pleased and reassured with the thorough retraining the Czech dentists are receiving, but as a Canadian citizen, I am even more thrilled with the efficient and intelligent officers in our Canadian Forces. Their knowledge of dentistry and their interest in the "students" and in the program was most evident. My concept of army dentists living a "soft", unproductive and uninteresting career sure has changed.

My compliments to you as Director General of Dental Services and best wishes for continued success.

Yours sincerely,

T. Wachna, D.D.S., F.R.C.D. (C)

ANNUAL MAINTENANCE CARE

MAJOR J.W. JOLLY, CD, DDS, DDPH



Annual maintenance care - a benefit or a nuisance? Obviously, to the patient it is a definite benefit. Many of our dental officers feel that it is a benefit. Apparently, as pointed out by Major Chatwin in his recent article, "The Military Concept",¹ some consider maintenance care to be a nuisance.

The statement, "Operators will be working just to keep up with the requirements of dentally fit personnel"¹ gives food for thought. This is a true statement, which gives rise to another question. Is annual maintenance care a time-saving device or a waste of time?

To answer this question, it was decided to analyse the amount of time spent on providing maintenance care to twenty "Red recalls" recently seen by the writer and to show the type of treatment required to maintain fitness. The following chart shows the results of this analysis.

MAINTENANCE CARE FOR 20 SERVICEMEN		
Treatments	Number	Time Required in Minutes
Examinations	20	20.3
Radiographs	13	14.1
Prophylaxes	20	768.6
Oral Hygiene Instructions	2	30
Topical Fluoride Applications	20	221.6
Scalings	2	60
Amalgam Restorations (Surfaces)	14	182.9
Crowns	1	94.3
Silicate Restorations	2	44.5
Partial Dentures	2	131.5
Other	4	39.6
TOTAL	100	1790.7

Since actual timings were not available for such a retrospective study, the timings for the various operations were computed from the procedure timings in "The Dental Condition of the Canadian Forces".² The only exceptions were two scalings, estimated at 30 minutes each, and the two oral hygiene instructions of 15 minutes each, since average timings were not available for these operations.

The annual maintenance care for these twenty individuals was completed in 29.85 hours of chairtime (1,791 minutes). That is an average of 1.49 hours per person

Shown below is the card used in this survey and it is interesting to note that the RCDC did pilot studies on the prototype of this card. One observation made during these studies was that the therapist is more objective than the dentist who has a tendency to confuse data gathering for survey purposes with data required for a clinical diagnosis. The dentist has a great urge to use lighting and instruments other than those specified. To be valid, this type of survey must be based on what can be observed under the conditions specified. Only then can results be equated to a standard for interpretation.

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PREVENTIVE PEDODONTICS - THE CAST SPACE MAINTAINER

MAJOR D.R. O'HARA DDS



Interceptive orthodontics is not an every day practice in the Dental Corps and therefore is of limited interest to us. However, all of us, every day, see the results of lack of space maintenance. We often see mandibular second bicuspid or maxillary cuspids crowded out of normal alignment in the dental arch. Worse still, how often do we see the periodontal, esthetic, or surgical implications caused by these conditions? For these reasons, the subject of space maintenance should be of interest and importance to us all.

Space maintenance refers to the preservation for a critical period of time, of arch length in the deciduous or mixed dentition stages. The purpose of this preservation is the prevention of an ensuing malocclusion and its related problems.

There are many ways to preserve arch length. The most ideal means of course, is the preservation of the natural primary dentition. Thanks to modern concepts of endodontics many deciduous teeth that once would have been condemned, can now be retained. However, there still are many cases that cannot be treated in this manner. For example, acutely infected teeth must be extracted in the interests of the health and comfort of the patient.

In 1953, Kronfeld published the results of a 14-year study on premature loss of deciduous teeth in 400 children 4 years of age and older. He concluded that there was a need for space maintenance in 70% of cases of prematurely lost second deciduous molars and in 51% of prematurely lost first deciduous molars.

In 1962, Davey, from the University of Toronto, showed that the largest amount of space loss results where deciduous teeth are lost prior to the eruption of the first permanent molar.

Therefore, we see that there is a definite need for a mechanical means of maintaining space created by the premature loss of deciduous teeth.

Any mechanical appliance that can "do the job" so to speak qualifies as a space maintainer. The tried and proved methods include:

1. cast appliances,
2. the use of preformed bands and crowns in conjunction with soldered wire,
3. removable acrylic partial dentures with or without clasps.

Therefore it is necessary for the operator to select the method that best suits his style. The cast appliance combines simplicity, efficiency and durability.

Editor's Note

This paper was presented while Major O'Hara was on course at CFDSS in CFB Borden. Major O'Hara is now in private practice in Kitchener, Ontario.

This paper will discuss the types, indications, advantages, preparation, impression and fabrication of cast space maintainers.

There are two different types of cast space maintainers used in pedodontics:

1. The intra-alveolar space maintainer is used when the premature loss of the second deciduous molar precedes the eruption of the first permanent molar. In this instance, the first deciduous molar is used as an abutment. The casting consists of a chrome-cobalt crown, an arm, and an intra-alveolar extension which is inserted through the gingiva to engage the mesial surface of the unerupted first permanent molar. After the first permanent molar has erupted the sub-gingival portion of the space maintainer is cut off. The rest of the casting is allowed to remain in position until the abutment tooth exfoliates or until the second bicuspid erupts. Where both the first and second deciduous molars are lost prior to the eruption of the first permanent molar it is necessary to use the deciduous cuspid as an abutment. Once the first permanent molar has erupted the horizontal arm is cut off and a removable acrylic appliance is inserted. This is especially indicated if there is bilateral loss of deciduous teeth.
2. The T-bar space maintainer is used primarily when the first deciduous molar is lost prior to the eruption of the first permanent molar. Although the deciduous second molar is present to prevent some mesial tilting of the first permanent molar it has been found that in a high percentage of cases there will be some loss of space. In this case the deciduous second molar is used as an abutment. The casting consists of a chrome-cobalt crown and a horizontal bar which ends in a "T" shape at the distal surface of the deciduous bicuspid. After the first bicuspid has begun to erupt the horizontal arm can be cut off and the abutment tooth allowed to exfoliate naturally.

The advantages of such a space maintainer are quickly recognized.

1. The material is rigid and will not allow any movement of teeth at either end of the edentulous span.
2. Since the crown of the abutment tooth is completely covered there is little chance of the appliance becoming loose or of the tooth becoming carious.
3. The appliance is comfortable and easily cleaned.

Preparation

The abutment tooth is prepared the same way in both cases. Needless to say, because of the need for tooth reduction, permanent teeth are never used as abutments.

1. All carious lesions in the abutment tooth should first be restored with silver amalgam.
2. With a disc placed in a guard a slight slice is taken off the mesial and distal of the tooth to relieve the undercut area. It is important to use a disc guard as any sudden movement on the part of the child could result in severe mutilation of the surrounding soft tissues.
3. The occlusal grooves are then deepened with a round stone and the tops of the cusps and the inclined planes are reduced using a flat stone. The entire occlusal surface should be reduced about 1mm.

4. Using a pencil stone, the undercuts on the buccal and lingual are removed and a finishing line is established.

5. The entire preparation is then smoothed using sandpaper discs.

The amount of tooth cutting is minimal and can be accomplished in a very short period of time without the use of an anaesthetic.

Impression

1. A lubricant such as 50% glycerine and 50% alcohol is applied to the preparation.

2. A copper band of the correct size is festooned and cut to extend 3-4mm above the tooth.

3. Small incisions about 2mm in length and about 2mm apart are cut parallel to the length of the band. The small tabs thus formed are bent alternately in opposite directions to provide retention in removing the impression.

4. A compound impression is then made and left in place.

5. After the compound has cooled an overall alginate impression is made and the copper band impression is removed with it.

6. The entire impression is poured in die stone and allowed to set until completely hard.

The T-bar casting is now ready to be fabricated. However one more important step is necessary before sending a cast for an intra-alveolar space maintainer to the laboratory. It is necessary to determine the distance between the distal surface of the abutment tooth and the mesial surface of the unerupted first permanent molar. This is most easily accomplished by measuring the distance on a radiograph and transferring this to the cast. Using a #701 bur a vertical slot is bored into the cast at the correct distance to accommodate the intra-alveolar arm of the casting.

Fabrication

The actual fabrication of the casting is a relatively simple laboratory procedure requiring approximately one hour lab time as it may be sprued, invested and cast along with a casting for a partial denture.

It is important that the horizontal bar be kept 1-2mm away from the gingiva for comfort and ease of cleaning. The bar should also be lined up along the gingival crest to coincide with the central groove of the underlying bicuspid.

Insertion

The appliance is then inserted using zinc oxyphosphate cement as the cementing medium. The only anaesthetic required is for local infiltration around the area where the intra-alveolar extension is inserted.

Summary

There is no doubt that space maintenance in children should be carried out. As in any preventive measure, a little effort and planning when the tooth is lost can save a great deal of work at a later date. The cast space maintainer is a simple method of accomplishing this end.

* * * * *

THE DRY SOCKET

MAJOR G.S. ZWICKER, BSc, DDS



The Process of Repair

The basic rules, as outlined in any textbook of general pathology,¹ concerning the process of repair are as follows.

- a. Clot formation is followed by the process of inflammation, which includes vascular dilatation, fluid exudation and the escape of leukocytes, e.g., polymorphonuclear leukocytes, lymphocytes, monocytes and plasma cells.
- b. Fibroblasts and fibrocytes migrate from tissue margins at the rate of 2mm per day along the fibrin strands within the clot. Phagocytes digest white cells and fibrin. Endothelial cells undergo mitotic activity and canalization to form blood vessels -- the process is called organization of the blood clot. The result: granulation tissue. Proliferation of fibroblasts follows, and a scar results.
- c. Epithelial cells proliferate, covering the defect.

The above applies basically to primary healing, but with secondary healing, the main difference is the increased amount of granulation tissue necessarily formed.

The Healing Socket

The process of healing which usually follows the extraction of a tooth is much the same.² Organization of the clot with the formation of granulation tissue is followed by fibrosis, epithelial proliferation and eventually the formation of bone. This too, is secondary healing.

Following the removal of the tooth, the blood in the socket coagulates, trapping erythrocytes within the fibrin meshwork. Within 24 hours vasodilatation of the remaining blood vessels in the periodontal membrane and the appearance of leukocytes occurs. Within three days fibroblasts proliferate from the remnants of the periodontal membrane into the clot; granulation tissue is the result. Osteoclastic activity occurs at the crest of the alveolar bone. Endothelial cells commence proliferation, forming capillaries.

On the fifth day the ingrowth of fibroblasts and small capillaries are evidence of the beginning of organization of the clot. The surface is covered with leukocytes and epithelial proliferation is evident. By the seventh day the clot is becoming well organized and new capillaries have penetrated the clot center with much of the fibrin being destroyed by phagocytes. Hyalin degeneration makes the remnants of the periodontal membrane no longer recognizable and the walls of the socket appear somewhat frayed. Bone trabeculae are often apparent and the margin of the socket exhibits osteoclastic activity.

By the 14th day, mature granulation tissue has replaced the clot. Uncalcified bone trabeculae formed by osteoblasts derived from cells of the disintegrated periodontal membrane are present at the periphery of the socket. Osteoclastic activity has rounded the crest of the ridge and the wound surface is completely epithelialized.

On the 21st day osteoblastic activity has occurred almost everywhere except at the crest. The socket is filled with poorly calcified bone which radiographically does not assume a natural "bony" appearance until the sixth or eighth week. By the tenth week the socket is about two-thirds filled, yet fifteen weeks must pass before the wound site is no longer apparent on radiographs. The crest of the bone, because of resorption, is depressed somewhat.

The Dry Socket

In about one to two percent of cases following routine extractions and seven percent of surgical cases, the normal healing process does not occur and a dry socket results. The condition has many synonyms: localized alveolagia, local osteomyelitis, alveolitis, alveolar osteitis, painful socket, necrotic alveolar socket, alveolitis sicca dolorosa, postoperative alveolagia and localized acute alveolar osteomyelitis.

The result is a socket bearing a broken down blood clot which is usually infected since blood is an excellent culture medium. It occurs more frequently in mandibular molars and bicuspid and less commonly in maxillary bicuspid. It can occur one to seven days postoperatively and if it persists beyond fourteen days, osteomyelitis can be the result.⁴

Etiology

The etiologic factors include a vast array of possibilities. Some suggest a seasonal factor, others geographical. The personal factor -- some patients always get dry sockets -- has been considered. The spread of pre-existing infection, trauma, poor blood supply, lack of hemorrhage, entrance of saliva, loss of periodontal membrane, mechanical interference of clot mechanism, introduction of bacteria, unsterile instruments or faulty technique, vasoconstriction due to excessive infiltration of local anesthetics containing epinephrine, foreign bodies, diseased tissues, excessive flushing and/or curettage of the socket, mouthwashes, sucking the wound, condensing osteitis, residual bone spicules, etc., are also referred to in the literature.^{3,5,6}

The role of systemic factors must be considered, e.g., kidney, heart and liver disease, diabetes, blood dyscrasias, syphilis, vitamin deficiencies, oral neoplasms, corticosteroid therapy, irradiation, endocrine disturbances and malnutrition. In fact practically any factor which can cause disease can cause a dry socket.³

In a Pittsburgh study of some 23,866 extractions it was found that 62% of the resulting dry sockets occurred following the extraction of vital teeth, thus discouraging the "condensing osteitis, pre-existing disease, low blood supply" factor. Only 56% followed traumatic extractions. There was a lower incidence found with general anesthesia.

The lower incidence of dry sockets during pregnancy was attributed to the increase in globulin. The high incidence in mandibular teeth was related to the lessened blood supply (e.g., one main artery and dense compact bone), yet the low rate of dry sockets in the maxilla, where infiltration anesthesia is used most, did not support the local anesthetic factor.

It was found that the entrance of saliva might be a factor, since when the painful condition subsided, fusiform bacilli and spirochaetes were not evident. Excessive use of mouthwashes was discouraged.

Symptoms

The symptoms include a partial or complete loss of the clot. The socket exhibits a putrefying odour and the denuded bone produces severe throbbing pain. The pain is constant, sharp and radiating, and usually begins two to four days postoperatively. Edema and trismus may be present.⁷

Treatment

The many variations in treatment outnumber even the etiologic factors. There is not sufficient space to list all those known to the writer. Some of the more common shall be considered.

Practically all sources agree that the patient should be made comfortable; the socket should be irrigated with warm saline (although one source suggests a dilute phenol solution) with little or no curettage. In general the medicinal treatment can be divided into two aspects: the actual drug and the vehicle. The vehicles used are usually an ointment or a gauze; e.g., five to ten percent iodoform or plain gauze (the former, an analgesic and antiseptic, is preferable in the presence of pus). The local treatment generally is repeated 24 hours after the first application and every 48 hours thereafter until no longer considered necessary.

Personal communication with several colleagues revealed their choice of treatment to be:

- a. iodoform gauze and alphamel, plus acetylsalicylic acid;⁸
- b. iodoform gauze and eugenol (or iodoform gauze and quaiacol plus eugenol if longer retention is required);⁹
- c. gelfoam plus eugenol;¹⁰
- d. iodoform gauze only;¹¹
- e. 5% iodoform gauze plus benzocaine;¹²
- f. iodoform gauze plus oral administration of 1gm penicillin G daily for three to five days;¹³
- g. alphamel plus sulfathiazole;¹⁴
- h. gelfoam plus polyantibiotic paste (Neomycin, Bacitracin and Polymyxin).¹⁵

The American Dental Association recommends a liquid (e.g., guaiacol plus glycerine; or guaiacol plus ethylaminobenzoate plus Peruvian balsam; or chlorobutanol plus eugenol) mixed with a paste (e.g., yellow wax, petrolatum, lanolin, eugenol plus ethylaminobenzoate; or petrolatum plus ethylaminobenzoate; or ethylaminobenzoate, chlorobutanol, methyl salicylate and petrolatum). It also recommends penicillin, should systemic therapy be advocated, but states that systemic sulfonamide therapy is not advisable unless a thorough pharmacologic knowledge and an awareness of possible adverse reactions is known to the clinician.

Bernier states¹⁷ that zinc oxide and eugenol should be inserted if pain is present. If pain is not present, he simply inserts gelfoam or fibrin foam. In both cases the gelfoam should be replaced every 24 hours until symptoms subside.

A Canadian dental school recommends a manufactured product consisting of iodoform gauze impregnated with thymol, eugenol and acetylsalicylic acid (A.S.A.). This is inserted with methyl salicylate, A.S.A. and eugenol. Topical antibiotics or sulfonamides are recommended if cervical lymphadenopathy exists.

Francis and de Vries⁴ recommend, in non-purulent cases, iodoform gauze plus a mixture of A.S.A., eugenol, olive oil and lanolin, (or gauze plus benzocaine and a polyantibiotic paste). In purulent cases, pain is controlled with mefenamic acid or propoxyphene, and infection controlled using Lincomycin. The local treatment consists of iodoform paste; e.g., zinc oxide, iodoform powder, eugenol and beechwood creosote.

Bonnette and Haywar⁵ recommend the use of zinc oxide and eugenol to maintain dressings in maxillary sockets. Quinn¹⁹ recommends the routine administration of antibiotics following impactions involving bone removal. Archer's⁶ reason for using zinc oxide and eugenol is to prevent the entrance of saliva. Thoma³ suggests iodo-

form gauze saturated with Ward's surgical cement, replaced every 24 hours until the symptoms subside. Kruger³ recommends plain sterile gauze saturated with thymol iodide powder and benzocaine crystals dissolved in eugenol.

Prevention

As one can see, many variations of treatment are open. However, many think that preventive measures are more important, although the American Dental Association¹⁶ states that "no medicament should be used routinely after tooth extractions to combat infection after extraction". Swanson³ claims a reduction in dry sockets by 34% using gelfoam soaked in a tetracycline solution. Kraus³ reports the use of trypsin was responsible in not only reducing edema but also reducing the evidence of dry sockets. Quinley, Royer and Gores³ recommend 50mg. tetracycline hydrochloride in the wound, while Huebsch³ perforates the socket walls with a sharp instrument to encourage bleeding. Local application of sulfa-cones, terramycin, aureomycin and systemic antibiotics, calcium, vitamin C and D supplements to undernourished patients, and removal of healthy bone have also been recommended.

Perhaps the following steps might be suggested as a preventive measure:

1. record an adequate history, e.g., history of dry sockets as well as systemic history;
2. minimize infiltration of local anaesthetics to minimize the effect of vasoconstrictors;
3. minimize trauma by carefully planning exodontia technique, e.g., surgical flaps if necessary;
4. leave the socket free of debris;
5. aid the clot formation with fibrin foam in large openings;
6. remove interradicular bone in molar sockets;
7. cover the socket with moistened gauze until the clot is formed;
8. if sufficient bleeding is not evident, pierce the lamina dura using a bone bur;
9. encourage gingival bleeding;
10. produce bleeding before the patient leaves.

Summary

The repair process, including the events which normally take place in the extraction site, was reviewed in an attempt to illustrate that there are many etiologic agents and modes of treatment of dry sockets. Practically any topical or systemic agent which can cause a diseased state has been suggested as possible etiology. The treatment in general consists of topical application of a drug via a vehicle. Systemic antibiotic therapy may be used, although these drugs are usually reserved for purulent cases, or cases of long duration. Routine use of medications should not be practiced preventively but may be indicated following traumatic surgical extractions involving bone removal. Topical antibiotics, sulfonamides or trypsin therapy may be utilized in such cases.

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«A PAGE IN HISTORY»

FORT SAINT-JEAN

MAJOR H.J. NADEAU, BA, DDS



The Dental Clinic at the Collège militaire royal de Saint-Jean? Six rooms at the end of a long building which also houses the Medical Inspection Room, quarters for the Members of Parliament taking French courses at the College, and a huge room where officer cadets practice judo. The clinic includes two operating rooms, an office, a laboratory, a reception room and an X-ray room, all very well equipped.

From this description one would think that the building is quite an ordinary one, but it is not so. As a matter of fact, the clinic is set up in a building erected much more than a hundred years ago. After the rebellion in 1837, with Colonel KH Oldfield and Major RE Foster in command, a hospital and several barracks, which could accommodate close to 1,000 men were completed at a cost of £17,231. For the last two years the dental clinic has been installed in one of these barracks.

However, the military history of Saint-Jean and the practice of dentistry in this place go much further back than 1837. In fact, it is more than three centuries ago that the first troops settled on the site where the Collège militaire has been built. In 1665, in order to encourage colonization and prevent the Iroquois from hunting on the Hurons' territory, the French constructed three forts along the Richelieu; those of Sorel, Chambly and Sainte-Thérèse. A year later, two other forts were built: one in Saint-Jean, the other north of Lake Champlain. We know that the French troops going through Saint-Jean were accompanied by Jesuit missionaries who looked after their spiritual needs, thus it is logical to assume that some people also administered dental and medical care.

As these fortifications had achieved the purpose they were intended for, more than eighty years passed before another fort was erected in Saint-Jean. This new fort was built in 1748. At that time, relations between France and England were rapidly deteriorating, and the threat of a war hung over the French colonies.

The task of defending Saint-Jean was then entrusted to Gaspard Joseph Chaussegros de Léry, a military engineer. Peter Kalm, who visited the place at this period gave the following description of the fortifications built by de Léry: "Fort St-Jean has a low situation and lies in a sandy soil, and the country about it is flat and covered with woods. The fort is quadrangular, and includes the space of one arpent square. Each of the two corners which look towards the lake is defended by a wooden building, four stories high, the lower part of which is of stone to the height of about a fathom and a half. In these buildings which are polyangular, are holes for cannon and lesser arms. In each of the other corners facing the country, is a little wooden house, two stories high. These buildings are intended for the habitation of the soldiers and for the better defence of the place. Between these houses, there are poles, two fathoms and a half high, sharpened at the top, and driven into the ground close to one another. They are made of the Thuya tree, which is here reckoned the best wood for keeping from putrefaction, and is much preferable to fir in that point. Lower down, the palisades are double, one row within the other. For the convenience of the soldiers, a broad elevated pavement, of more than two yards in height, is made in the inside of the fort all along the palisades with a balustrade. On this pavement the soldiers stand and fire through the holes upon the enemy, without being exposed to their fire."

The second military establishment was used until the advance of the English troops under the command of Lieutenant-Colonel Haviland. Seeing that he was fighting a lost battle, Monsieur de Villejoie, with the help of twenty men, burned down the fort on the 30th of August, 1760.

At that time, the English, as well as the French, understood the strategical importance of Fort St-Jean. Threatened by the American troops in 1775 during the Revolution of the thirteen English colonies, they entrusted Major Preston with the task of consolidating the fortifications of Saint-Jean. The carpenters built two large redoubts, a thirty-oared galley and a schooner with twelve guns. If these defensive works were unable to stop the Americans, they delayed the enemy long enough to thwart its plans and prevent Canada from becoming the fourteenth American state. "One of the principal reasons why Arnold and Montgomery were not able to capture Quebec on the 31st of December, 1775, was the stubborn resistance put up by Major Preston's small army at Fort Saint-Jean the same year."¹

The history of this place is full of interest: first, it was Indian territory before being occupied successively by the French, the English and finally by the Americans during the winter of 1775-1776. Although no battle was fought at Saint-Jean from 1776 to the present day, buildings existing at this period, one of which is now used as a dental clinic, housed in succession English troops from at least fifty regiments.

When plans were made to open a bilingual military college, historic Fort Saint-Jean, where French and English had fought side by side, was chosen in preference to the Citadelle of Quebec. It is known that a dentist was attached to the military personnel in Saint-Jean long before 1952, as for instance during the two World Wars. Since the opening of the college, from fifteen to twenty thousand patients have been treated at the dental clinic by the Barbers, the Bossés, the Marcils, the Pigeons, the Berthiaumes and the author.

Today, the Collège militaire royal de Saint-Jean is a green island with streets and avenues lined with trees where birds wing their way and squirrels frisk about. Inside its walls nearly four hundred young men study, work and play together, preparing themselves for a career as officers.

If you go through Saint-Jean, the friendly and courteous residents will be pleased to show you the way to this institution. At the entrance, you will see a plaque bearing these simple words: "Fort Saint-Jean, 1666", which is more than three hundred years of history.

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FISHING AND HUNTING IN MANITOBA

CAPT. GEORGE JACQUES, DDS



When I came to Winnipeg three years ago, I admit that I did not know too much about fishing and hunting. I had the impression that fishing was a dangerous and expensive activity, and that the bony and dried meat was not even worth the trip. As for hunting, I could not understand how a person could be foolish enough to spend \$300 on equipment, get up at 4 a.m., travel 100 miles trying to wake up and end up in two feet of swampy, stinking and freezing water waiting for some lonely "honks" and "quacks"; or end up, after a few miles of stumbling on top of a hill, kneeled down silent, facing the cold wind and dying for a cigarette, in wait for an eventual deer, the closest being at least five miles from there. In other words, I thought that fishing and hunting was just boring and useless killing.

Well, it did not take long before I honestly had to change my mind, first about fishing. There are 39,000 square miles of water in Manitoba, including 100,000 lakes, and lots of pickerel, trout, pike, char and goldeye, the latter only found in this province. All you need to catch them is a \$7.00 reel and rod, a few lures and spoons, one or two good friends like Cpls Hannah and Challenger that own a boat, and to be at the right spot. I thought you had to wait for hours before the first bite, and then just pull the fish into the boat. Well, in three hours, Major Harreman and I teased and caught fifty-three pickerel (some mere saugers, mind you), fifteen miles from Winnipeg. One was a four-pounder, and that one was worth the excitement. After a few minutes of strenuous and calculated struggle, my three-pound test line brought him beside the boat. With caution, we presented the net, which was enough to scare him away. Then I pulled hard on the line so to rush him into the boat. The line broke, but happily he was on the inside of the boat when it happened. Another fishing trip I will never forget is when the dental staff in Winnipeg were guests of Capt Wilford in Gypsumville. We are still thankful for his kind hospitality. On the Dauphin River up there, the yellow "Lazy Ike" was the lure to have. A bit of problem with the motor (there was a hidden screw underneath), but sixteen pickerel and three pike in six hours and none less than two pounds! Major Harreman volunteered, to my satisfaction, to fillet them on place. Those fillets were delicious, grilled with a mixture of butter, lemon and parsley. That trip alone was enough to convince me about fishing.

As for hunting, I had to wait for this last fall to really see what it was all about. It was in the marshes of Metley Lake with Cpl Brian Hannah - the first day for duck hunting - that it all started. Walking toward our spot at 5.30 a.m. you could sure hear them. They were there by dozens. Pintails, teal, mallards waiting for the sunrise to take off to the nearby field. At 6.45 a.m. we were well hidden, eyes wide open and all excited. Then, "here they come," murmured Brian frantically. I thought they were there by dozens, but there were hundreds and thousands of them. Around 9 a.m. they came back from the field - some impressive and splendid display! It took three hours to realize that our feet were almost frozen. By that time, we had three mallards and five teal. Incidentally, did you know that as many as five species of geese and fourteen species of ducks either breed in or pass through Manitoba enroute to southern wintering grounds?

A week later, I was initiated to upland game birds. We met a few rabbits and squirrels but when we saw that first flock of about ten ruffed grouse, it paid off for all the walking that took us to that spot. The three of us, Lt Hansen, Cpl Hannah

and myself must have emptied at least twelve shells, but only one bird was hit. Who killed it? We are still debating. I kept for one week a sore souvenir of that trip, having real difficulty to move my right shoulder.



The 17th of November was the opening day for deer hunting in CFB Shilo. Every hunter must dress with a white outer suit plus the compulsory orange-coloured hat. We could see each other at a mile. I had that \$15 British .303 ready for action when, on the second day, the three of us walking side by side, that nice white-tailed doe came out of the woods, fifty feet in front of me. In one second flat, I knelt down and aimed. Some other hunters on my right had also noticed the doe, but I had the chance to be the first to pull the trigger. I felt I was the happiest hunter in the world. A hundred pounds of meat and bone! That was the interesting part, I was told, wait till you open it and remove the "innards". I was in there up to my elbows but it did not bother me. Did you know that an estimated amount

of 5,000 deer have been killed during the 1968 deer season in Manitoba; that there are two moose hunting seasons; and that within 200 miles of Winnipeg you are almost guaranteed your elk and your caribou?

Yes, three years ago, I thought that there was no interest in fishing or hunting. In fact, chasing, driving, flushing, attacking, pursuing, worrying, following, searching for, shooting at, stalking, and lying in wait for game are all facets of hunting; each of these situations making the trip worthwhile whether the animal is killed or not, big or small.

RCDC BONSPIEL

The Eighth Annual RCDC Bonspiel will be held at CFB Borden
27 and 28 February 1970.

1 Dent Unit

Appointments

Major DE McDermott was appointed Commanding Officer of No 1 Dental Unit on 20 October. He succeeded LCol WH Harrington, who was posted to CFB Petawawa.

Special Events

Visit of Col E.L. Deane, Director Designate of Australian Dental Services. On 28 October, Col Deane, accompanied by Major McDermott, toured No 1 Dental Unit. The Australian Director had high regard for the organization of the CFDS and hoped to similarly fashion the Australian Dental Services which are presently three separate entities: Army, Navy and Air Force dental services. One fact which impressed Col Deane was the ready acceptance by other services of "brown jobs" on HMC Ships and air stations.

Division News

Major JVP Chatwin was busy lecturing on Preventive Dentistry to Czechoslovakian dentists at the University of Western Ontario during January ... Mrs Charline Madore has taken three months leave to produce a new Canadian and has been temporarily replaced by Mrs Gloria Ryan ... Miss Ruth Victor escaped January's cold weather by holidaying in Hawaii ... closely following her southern route were Col and Mrs GR Covey for three weeks ... CWO Pen Griffith-Jones has replaced CWO Jim Taylor in the general office ... Cpl Rick Pockett recently returned home as a one-man "ways and means committee" to see his fiancée and sort out the innumerable details of his forthcoming marriage.

The annual Christmas Party, held on 19 December in the Junior Ranks Mess, CFB Uplands, was hosted by the officers of the Division and 1 Dental Unit and well attended by all personnel associated with the Dental Services in the Ottawa area.

CFDS School

Visits

Col Ewan L. Deane, OBE, Deputy Director Dental Services, Australian Military Forces, visited the CFDS 3-4 November.

Guest Lecturers

Col IG Craigie delivered a speech, "The Dental Therapist in the Canadian Forces Dental Services" to the Ontario Dental Hygienists' Association in Toronto in November.

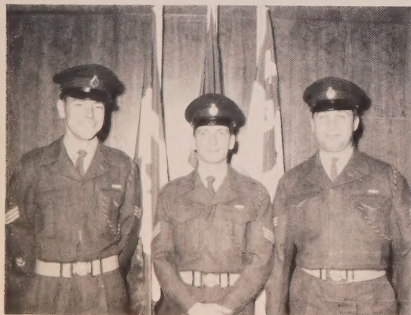
LCol PS Sills presented a paper to the American Prosthodontic Society in New York during October.

Professional Seminars

Major HW Brogan and Capt DG Wilson attended a one-day clinic and luncheon of the West Toronto Dental Society 1 November. Guest speakers from the medical specialties covered the theme "Office Emergencies - A New Approach".

Capt DW Pettigrew attended the Annual Winter Clinic of the Academy of Dentistry in Toronto's Royal York Hotel 27 November. Ex-Capt Victor Rausch was one of the featured speakers on "Deep Suggestive Therapy - A Neglected Science".

Promotions



The welcome news of their promotions to Sergeant is reflected in the smiling faces of (L to R), Bob James, "Danny" Danyluck and Darryl Mason.

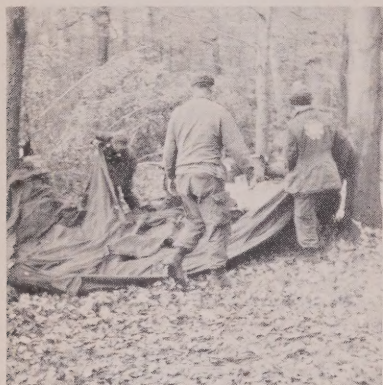
Gary Albertson, the fourth new Sergeant in this wave of upgrading, was absent on duty at the University of Western Ontario.

Awards

CWO Bill Morris was selected for a trip around the world on a Canadian Forces Yukon flight which originated in Trenton, Ontario and included some of the most popular stop-overs in the Pacific, Near and Far East, Africa and Europe. After inoculations and vaccinations he had not heard of in years, he was well prepared to represent Canada in his new green uniform.

Courses

Dental Assistant PL3 and Dental Clinical Assistant PL6 course candidates, dressed in the unisex type of combat gear, with the girls using flower power to identify themselves, had a great time in November during several days of field exercises at Meaford, Ontario. In spite of the first snowfall of the season, they managed to be efficient and comfortable simultaneously. There was even time for good old-fashioned frolics, hot coffee, singalongs, get-togethers and displays of artistic talents. An outdoor brush-in was held which they promptly dubbed "Operation Pom-Pom".



Left to right: Top left: Cpl Bev Gilkes, behind tent; Cpl Jim Busse's back; Cpl June Patterson displaying her etchings. Top right, Cpl Bev Gilkes, Cpl Skip Solomon, Pte Ilse Kuepper (patient), Cpl Noel Audet, Pte Susie Green. Bottom left: Pte Ilse Kuepper and young friend ... in the girls' quarters? Bottom right: Cpl Bev Gilkes, PL6, Pte Ilse Kuepper, PL3, Cpl June Patterson, PL6, Pte Marg Williams, PL3.

Sports

Sgt Ron Danyluck and Cpls John Clint and Pete Nadeau were members of the winning team of the Zone 5 Football Championships Team at Base Borden, competing against teams from Toronto, London and Clinton.

A rink skipped by Capt Max Fisk with MWO Bob Goodwin as vice and Capt Dave Devine as lead won the "A" Event in the 16th Annual Yuletide Bonspiel held 26 to 28 December.

Capt Doug Pettigrew Captures First Place Judo Trophy. York University in Toronto was the scene on November 15 as 1,200 judoka competed in the 1969 Eastern Canada Judo Championships in which Capt Pettigrew represented Base Borden. The division in this big shiai was broken down into white, yellow and orange belts, green and blue belts and brown belts respectively. Doug entered as an orange belt in the under-169 lb class.

Doug fought extremely well, according to his clubmates, as he went through six competitors to capture the first place in his division. He beat out his first competitor with a clean throw by using Tai-otoshi (body drop). His second bout was won on a decision by the referee. Doug beat his third opponent on a wazaeri, (half point) by using ashiguruma (leg wheel). The fourth match didn't last long as he applied juji-jima (strangulation hold) on his opponent, forcing him to submit. This qualified him into the semi-finals. In the semi-final match, Doug used a combination of sasaetsurikomiashi harai (sweeping blocking ankle throw), giving him a wazaeri and immediately went into the kesagatame (scarf hold), pinning his opponent for 25 seconds thus winning the match.

In the final match, Doug tripped his opponent with asaetsurikomi-ashi (blocking ankle throw), gained a half point, then pinned his opponent to win the match and the trophy.

As a result of his fine showing, Capt Doug Pettigrew was promoted to green belt by the tournament officials.

... Any challenger for a bout of judo ... or spelling?

11 Dent Unit

by MWO RD McHugh

Visits

Capt AF Brothers attended a one-day symposium at the Pallister Hotel in Calgary on preventive and interceptive orthodontics.

Capt RCA Fearon attended a course in oral medicine conducted at the University of Alberta from 4 to 10 December.

Capt DL Poy attended the Vancouver and District Dental Society in Vancouver, 4 November. Dr. Kleinberg of the University of Manitoba gave a very interesting lecture on the biochemistry of dental hygiene.

Dr. Edward Hyde and Ernie Carpenter, former members of the Corps, visited the dental detachment in Chilliwack. Both had been employed there some twenty years ago.

Personnel

Capt HA Pankratz will be specially employed at the University of Western Ontario from 5 to 30 January to assist in the training of Czechoslovakian dentists.

Goodbyes were said recently to Cpl DM Eden, CFB Comox, on his release at CFB Esquimalt 27 November. Cpl Mabel Koch of the Cold Lake detachment returned to civilian life on 9 December.

Training and Courses

Capt JL McNeill participated in Exercise NIMROD LEAP with the Canadian Airborne Regiment in Jamaica during November.

Cpl GG Carscaden and Pte D Purich recently completed Dent A (721) PL 3 Course at CFDS, Borden, conducted from 8 October to 9 December. Cpl Carscaden was the outstanding student, placing first in the class.

Sports

Capt KE Rosengart was a member of the CFS Holberg badminton team which competed in the Zone 1 Championships held at CFB Esquimalt 8 to 13 December.

The first annual "Best Buck" contest, open to members of the dental detachment at CFB Cold Lake, was held from 5 to 14 November. Six members entered and tried for the trophy donated by Capt Pankratz of the clinic. On the afternoon of 11 November, LCol RB Jackson, Major RB Andrews, Capt HA Pankratz, Capt RW Rix, CWO RH Daw and Cpl AH Peck participated in a deer drive. LCol Jackson proved himself the opportunist of the day by bagging a 300-lb five-point whitetail buck. Capt Pankratz managed to get a whitetail doe in the same hunt to round out a fine afternoon.

Another entry in the "Best Buck" contest was a three-point buck mule deer shot by Capt Pankratz two days earlier. The "Best Buck" trophy was presented to LCol Jackson at the clinic party on 14 November, attended by members and their wives.



Left to right: Capt RE Rix, LCol RB Jackson (trophy winner), Capt HA Pankratz, Major RB Andrews, CWO RH Daw and Cpl AH Peck.

The opening curling 'spiel was held at CFB Cold Lake 11 to 13 October. MWO Jack Fraser and rink placed third in the first event.

The 11 Dental Unit Annual Bonspiel was held during the weekend of 12-13 December at the Lancaster Park Curling Club, CFB Edmonton. Teams were entered from Cold Lake, Calgary, Penhold and Edmonton. A bonspiel party was held in the Recreational Centre at Lancaster Park the preceding evening. Approximately seventy-five unit personnel and their ladies attended.

The draw got away on Saturday at 8 a.m. The Jack Fraser rink from Cold Lake and the University of Alberta rink skipped by Darryl Graham were the favoured rinks. The Fraser and Graham rinks met in the semi-final of the "A" Event with the University boys taking a rather easy win and looked good enough to defeat the Dick Walker rink from HQ Edmonton, who came through with two wins to enter the finals. However, Walker and his boys proved to be just a little too tough and after losing an early lead came on again to win in the final end. Dick and his crew put together three good games and took the Commanding Officer's Trophy for their efforts. This is the second time the "Dick Walker" name has gone on the trophy as the winning skip. The rink skipped by Sgt Harry Ayeret won the NCOs' Trophy donated by Dr LW Singer for the "B" Event. Harry and his team defeated a rink skipped by Major Bill Collier in rather handy fashion.



"A" Event Winners

Garth C Evans Trophy

Left to right:

Skip: Sgt Dick Walker
 Vice: Col Garth Evans
 Second: Sgt Ken Shergold
 Lead: LCol Don Hillier



"B" Event Winners

Dr LW Singer Trophy

Left to right:

Skip: Sgt Harry Ayerst
 Vice: Cpl "Happy Jack" Schultz
 Second: Capt Paul Kozak
 Lead: Cpl Doug Morphett

In Hospital

Capt RW Rix spent a few days in the base hospital at CFB Cold Lake as a result of a knee injury sustained in a recent hockey game.

Mrs Howson was admitted to hospital in Victoria on 23 November and will be absent for about six weeks.

Congratulations

...to Major RJ Paturel on his recent marriage. Major Paturel travelled a long way to tie the knot in marrying Miss Ragnhild Gade Thomsen in Redsted-Hvidbjerg, Denmark, on 22 November. Prior to his leaving for Denmark, Major Paturel was honoured at a stag party held in the Wardroom, CFB Esquimalt.

12 Dent Unit

Invitations

The following is an extract from a Routine Order published by HMCS Cape Scott:

"DENTAL - For those who did not have the opportunity to sample the new "Dental Cocktail" (Fluoride): Please leave your name at the dental clinic within the next few days. You will be piped 10 at a time and the party will commence in the forward washplace. Bring your toothbrush; from here it will continue aft to the dental clinic where you will be given one for the road. There are no age restrictions for these parties. However, real teeth are a necessity."



BGen BP Kearney cuts the ribbon to officially open the new clinic and Preventive Dentistry Centre at Cornwallis as Capt (N) HR Tilley, Base Commander, and LCol JMA Donely, Base Dental Officer, look on.

Sports

Capt Joe Cote has become the hockey star of the Gagetown Warriors in the Southern New Brunswick League.

Apologies

The brevity of this report is regretted; however, as one of our Base Dental Officers reported: "Hard work is not very interesting".

14 Dent Unit

by WO JM Roberts

Special Events

Despite rumours of closure of some Canadian Forces Bases in the Prairie Region, CFB Rivers is trying to stay in the flying business even if they take the big airplanes away. The base has now started a model aircraft club. Capt Earl Nind has for some time been a keen enthusiast of this hobby and became involved in starting the club, ending up as secretary-treasurer.

Even considering the ".08" legislation recently put into force, the members of this unit were still able to attend and enjoy many festive season activities. This may be due largely to the fact that CFB Winnipeg made a Defensive Driving Course available in early December, heavily attended by RCDC personnel.

Sports

WO HD Wagstaff represented CFB Gimli in the Veterans' Zone badminton play-offs held in Winnipeg 11-12 December. The Gimli team placed "runners-up" in the doubles.

Major RH Headley and Cpl GW Mandrusiak were on a CFB Shilo curling team in the Zone 3 play-offs but unfortunately were knocked out in their third game.

13 Dent Unit

by Sgt ES Beattie

Visits

CFB Petawawa dental detachment was visited on 27 October by Colonel EL Deane of the Australian Army Dental Corps, accompanied by Col JW Turner and LCol JW Fletcher from Ottawa.

Personnel

Cpl WR McIntosh suffered a serious heart attack and was admitted to St Joseph's Hospital, North Bay, on 16 November. Some time in January, when he has recovered sufficiently to make the trip, he will be transferred to NDMC in Ottawa. While Cpl McIntosh recuperated, his position was filled by Sgt EL Schell from Trenton and Cpl MGE Williams from London. Cpl GE Sykes may be posted from CFB Winnipeg early in February to relieve the situation.

Remuster - Capt DM Hodges - from dental officer to newspaper columnist. Capt Hodges' column "Dental IQ" is a feature in the CFB Petawawa weekly newspaper. His style is easy for the prospective patient to read and understand. Possibly a few more such authors would benefit the profession and the Dental Services. (...and the Quarterly?)

CFS Moosonee has acquired a neophyte politician. Cpl JE Thomson has been elected councillor in the PMQ Council elections. In a community such as Moosonee, this is an important position. The Council plays a large role in boosting and maintaining the morale of the station. Perhaps in the future, some can say they "knew him when..."

CORPORALS "A" AND "B" RECEIVE CD



Col RHG Cunningham presents the CD to Cpl G.M. Anderson (left) and Cpl B.F. Breadner.

Cpl Gerry Anderson enrolled in Vancouver on 8 August 1957. In 1966, in Germany, he transferred from the PPCLI, completed training as a dental assistant at CFB Borden, and was posted to the dental clinic at CFB Trenton. He completed his dental lab technician PL4 course at Borden in December 1967 and has since been employed in the dental lab at Trenton. His main sport is golf in which he has won several trophies.

Cpl Barbara Breadner enrolled in Toronto on 25 February 1957. After basic training, she served at CFS Falconbridge and in Metz. She completed an administration course at CFB Borden then returned to 1 Wing, Marville and later moved to Lahr, where she was promoted Corporal. She is at present employed in dental administration at CFB Trenton. Barb is an accomplished softball pitcher.

Retirement



Major HG Bunston was presented with an engraved silver tray from 13 Dental Unit personnel on his retirement. On hand for the occasion were, left to right, front row: Cpl MG Williams, Major Bunston, Sgt TR O'Mara, LCol WR Thompson; back row: Sgt WG Harmer, Capt RI Stammers, Major L Dombowsky.

Sports

Personnel of the North Bay clinic are entered in the CFB North Bay volleyball league.

At CFB Petawawa, Capt GE Rocque is playing hockey for the 2 Service Battalion team, and Cpl PR Coss is playing for 2 Service Battalion in the base basketball league.

LCol RA Fell and Major IAC MacDonald were winners in the CFB Kingston curling eliminations held 3 to 5 December and competed in the Zone 5 playdowns in Toronto, 5 to 9 January.

At CFB Trenton, a truly dedicated coach, MWO Roy Matheson, has been an enthusiastic supporter of both the midget baseball and pee-wee hockey leagues. He was instrumental in obtaining trophy donors for the baseball league and also getting the league's first end-of-season banquet which was thoroughly enjoyed by a mess hall full of boys and girls. Roy was handicapped in that he was unable to provide the transportation he needed for his teams with his convertible. This situation has now been rectified for the hockey team. He now has his convertible plus a new ten-passenger station wagon and can be sure that both boys and equipment reach the games, and practice, on time.

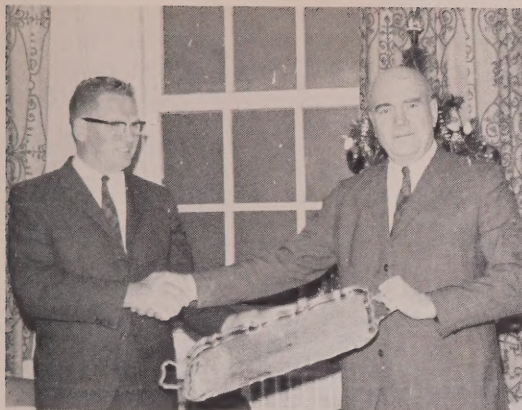
15 Dent Unit

by MWO AF Davison

Retirements

The annual "All Ranks" Christmas Party was combined with a retirement party. It was truly a "unit" party as personnel arrived from Valcartier, St Jean and St Hubert to wish Colonel CM Cornish and WO GH Couture the best in civilian life.

On 29 January, Col Cornish will receive the Key to Outside of the City of Montreal. His passport is in order and he has a clean bill of health. So we must say "au revoir" and "bon voyage" to a good Commanding Officer and a fine gentleman.



Top left: LCol G MacDougall presenting a silver tray to Colonel Cornish.
 Top right: Col Cornish admiring his private "hot line".
 Bottom left: WO Couture receiving a retirement gift from Major JJB Houde.
 Bottom right: Major BA Gaudet requesting a posting.

Colonel Cornish has been an active RCDC officer for the past 28 years. He has served from coast to coast in Canada, two years in Europe and a short stay with the Navy in Northern Ireland. Many personnel have used his sympathetic ear to better their career and ease their peace of mind. An active curler, skier and world traveler, his stories and injected notes of humour will be missed by all who have known him.

Col Cornish was presented with a silver tray and a private telephone so that he could keep in touch with activities in 15 Dental Unit.

WO Couture was given a briefcase and Mrs Couture a bouquet of flowers. A candlelight dinner was held at CFB St Jean to honour WO Couture on his retirement.

1 Dent Eqpt Dep

Awards

Sgt JAL Boulianne has been awarded the CD. Following his recent promotion, CWO L Lawson received his warrant, now being issued in the new Canadian Forces style.

4 Fd Dent Coy

by Sgt P Fox

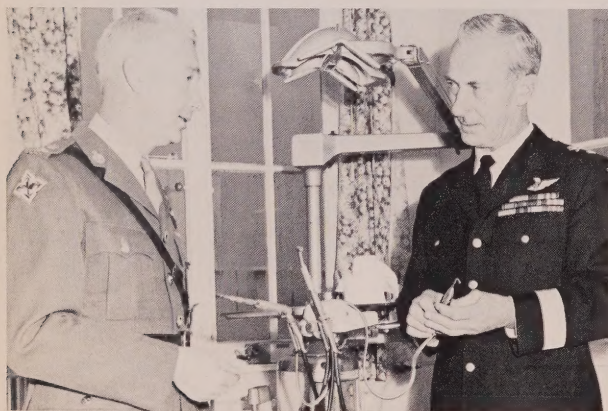
Conferences

LCol GE Windsor and Majors DG Jones and EF Foley attended a dental conference in Nurnberg from 21 to 23 December.

Visits



BGen BP Kearney and Major CA Casterton with members of 4 Fd Dent Coy during a visit in December.



BGen Kearney (right) and LCol Windsor discuss plans for re-location of dental equipment.

MWO JW Hutchinson visited the dental detachment on Cyprus and reported that the weather made him reluctant to return on schedule.

Training

Exercise MARSHMALLOW, the annual NATO exercise, commenced at 0001 hours 13 October with the Canadians acting as the aggressors and the dental section drawing the most blood. 4 CMBG won the war in two days but since it was a ten-day exercise, they had to do it over again.

Sports

LCol Windsor and his team won the "A" Event of the CLFE Opening Bonspiel.

The unit is participating in recreational curling in preparation for the RCDC (Europe) Bonspiel with 35 Fd Dent Unit.

Festive Season

A christmas party for all ranks at Headquarters and the Soest area was held at the Lindenhof Gastatte (more commonly known as "The Green Shack") on 12 December.

35 Fd Dent Unit

by WO RJ Lowery

Preventive Dentistry Centre

The Preventive Dentistry Centre, staffed by Capt JW Montgomery, WO RJ Lowery and Pte(A)(W) ML Marcoux has virtually completed all Phase 1 treatment for 1 Wing personnel — over 1,000 treatments in two months.

Dependents' Clinic

A new dental clinic was opened at the Canadian Caserne in Lahr on December 2. This clinic, which will provide treatment for service personnel stationed at Air Division Headquarters as well as dependants and other civilians in the Lahr area, consists of four operatories and is staffed by Capt WD McKenzie and Cpl(A)(W) ME Mahlitz. Two civilian dentists, Drs Ivor Hamilton and Chad McIntosh, are providing the treatment for dependants.

DGDS Visit

BGen BP Kearney and Major CA Casterton visited the unit from 8 to 11 December. A briefing of all ranks was held in Lahr on 8 December and personnel were informed who would be returning to "The Land of Round Door Knobs" in 1970. Tears seemed to be the order of the day.

A dinner was held in the Black Forest Officers' Mess on 8 December to honour BGen Kearney. All unit officers and their wives were in attendance as well as several guests including the Commander, MGen DC Laubman, the Regional Surgeon and SSO Pers.

Training

LCol DH Protheroe and Major JLY Cyrenne attended the USAFE Dental Conference at Berchtesgaden, Germany, from 17 to 20 November. This was an interesting conference by virtue of its size (1,200 were registered), and the fact that all of the health disciplines were represented. General sessions were held in the mornings and specialty seminars in the afternoons.

Promotions

Our first Master Corporal, Dick Gratton, held the honour for only three months before he lost his crown and gained an additional stripe. Our new Master Corporal is Cpl(A)(W) ME Mahlitz.

Christmas Party

The unit Christmas Party was held at a local gasthaus in Lahr on 13 December. After cocktails and dinner, a dance was held. An excellent time was had by all as a result of WO Denny Hughes' and Sgt Dan Hardy's hard work in arranging the party. Sgt Ron McDonald was St Nicholas and Capt Cooper was Black Peter. There were nearly as many lumps of coal given by Black Peter for misdeeds during the year as there were Christmas presents.

Dent Det Cyprus

Morale



In mid-December, the CBC did their annual "Christmas Thing" entitled "Showtime in Cyprus".

Left to right:

Lt R Wen, Pioneer Officer, Black Watch; Miss Debbie Lorie Kaye; Capt BL Hart, Dental Detachment.

Sports

Sgt HJF Hope, the fastest sergeant on the island, placed first among the sergeants in the cross-country run.

Professional Training

University of Michigan, Ann Arbor, Michigan

Major IAC MacDonald ... Crown and Bridge ... 10-21 November

Capt DA Graham ... Endodontics ... 1-12 December

Major TD Cobb ... Occlusal Adjustment ... 12-16 January

United States Naval Dental School, Bethesda, Maryland

Capt JS Dion ... Oral Surgery ... 5-9 January

Major GS Zwicker ... Oral Surgery ... 5 January (seven weeks)

Capt DL Poy ... Oral Pathology ... 12-16 January

Major CL Gullekson ... Crown and Bridge ... 9 February (seven weeks)

Capt ED Cragg ... Removable Partial Dentures ... 16-20 February

Ent Air Force Base, Colorado Springs, Colorado

Capt HM Amos ... Oral Surgery ... 9-20 February

Training

Canadian Forces Dental Services School, CFB Borden

Officers' Clinical (Periodontics), 11-25 February

LCol DH Hillier, Major WR Collier, Capt DL Brown, Capt DJG Chausee,

Capt YTA Gagnon, Capt GC Post

Dental Laboratory Technician PL5, 7 January - 17 February

Sgt RS Lindsay, Cpls GM Andersen, JMM Arbour, P Maelde, JM McKenzie, WH Renwick, RJ Tallack, JH Taylor, JM Walker, DC Feeney

Dental Equipment Maintenance Technician PL5, 7 January - 17 February

Sgt BA Green, Cpls JPGA Cliche, JA Clint, EJ Schultz, JA Wesley, Pte HE Lubitz

Canadian Forces Air Training School, CFB Borden

Basic Electricity, 3-21 November

Cpls JA Schultz, JP Cliche, JA Wesley, Pte HE Lubitz

Junior NCO Course, CFB Shilo, 7 January (seven weeks)
Ptes DP Kurbis, EAJ Morin

Training with Industry

Ceramco Porcelain to Gold Course, JF Jelenko Company, New Rochelle, N.Y.,
19-30 January
Sgt H Markwort

Installation, Maintenance and Repair of Ritter Co. Equipment,
Ritter Equipment Co., Rochester, N.Y., 3-7 November
Sgt PE Harkin

Ticonium Equipment Installation and Maintenance Course, Ticonium Co., Albany, N.Y.
1-5 December
Cpl JA Clint

Welcome to the Corps

A cordial welcome is extended to Pte(S)(W) EL Joneson, Pte(L) AS Cromwell, Pte(L) FL Cotton, Pte(L) D Bowering, CWO(L) PM Griffith-Jones, Mrs K Atkinson, Miss S Weiss.

Promotions

To COLONEL: WR Thompson
MAJOR: HJ Nadeau
LT: WA Jackson, B Vandervaart, LR Hatcher
CWO: WD Morris
MWO: (A)(W) CM Torrens, AL Strub, JE Raymond, AMC Jerome, RK Jones
WO: N Cable, DJ Davies, TJ Deloughery
SGT: JR Ritchie, JAN Audet, RW Danyluck, RK James, DW Mason, H McRae, PJ Armstrong, JAL Boulianne, RG Brighty, RK Delmage, AF Randall, DS Smith, GK McDonald, HE Ayerst, JD Cormie, ML Allen, GG Albertson
CPL: GR Lamontagne, AD Hurley

Retirements and Releases

Col CM Cornish, Majors VM McMaster and JCRR Roy; WO GH Couture, Cpls DM Eden, (A)(W) ME Koch, JEL Frechette, HH Nogler; Mrs EJ Powell, Miss GL Thorp, Mrs P Labreque.

Vital Statistics

Marriages

Sgt JAN Audet to Miss Linda Phillips ... Major RJ Paturel to Miss Ragnhild Gade Thomsen ... Cpl JD Chaisson to Pte(w) ML Marcoux ... Cpl SF Boulanger to Pte(w) MML Dumont.

Births

Daughter: Cpl and Mrs PJ Mehler ... Cpl and Mrs RM Clarke (adopted)... Capt and Mrs RJ Burns ... Cpl and Mrs MJC Michiels ... Capt and Mrs JGL Dessureault ... Capt and Mrs JC Steel.

Son: Capt and Mrs JAR Fortier ... Cpl and Mrs TJ Parent (adopted) ... Major and Mrs RM MacDonald ... Cpl and Mrs JGJ Labrosse ... Sgt and Mrs JD Cormie ... Cpl and Mrs G Porteous ... Capt and Mrs WJ Percival.

Condolences

Sincere sympathy is extended to Capt JW Montgomery and Major RJ Headley on the loss of their mothers and to Cpl(A)(W) BF Breadner and WO SH Lunnin on the loss of their fathers.

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